

AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, EDITOR.]

SATURDAY, JULY 19, 1834.

[VOLUME III.—No. 28.]

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, JULY 19, 1834.

RAILROADS.—We have taken some pains to obtain correct information relative to the different railroads in this country, that we might publish it in a condensed form, for the convenience of those who read the Journal. It is very difficult, however, to obtain any account relative to many of them, and even when descriptions have been furnished, in some cases there is a want of precision, which is always desirable when one seeks for information for practical purposes. It will therefore be seen that in many instances the brief descriptions given, are derived from sources not authentic, and of course there must be errors. They are given, however, by way of eliciting more correct accounts from those who have the means of giving them. It is hoped that gentlemen connected with the different railroads, who have not, as requested, forwarded a description of these works, will, on the receipt of this and the subsequent numbers containing these brief accounts, furnish without delay a statement from which the necessary corrections may be made—as the type will be kept standing for that purpose. We are the more desirous to receive such corrections, as it is intended to have them accompany the *Railroad Map*, (which is now nearly ready,) in a small portable form.

It is desirable that the date of charter, amount of capital, commencement, progress, and present condition of the work should be given—also, the length, route, mode of construction, and probable connection with other roads, should be given, together with such other facts as may be of interest to those engaged on other works. It is a matter of great interest to know with what other roads they may eventually be connected.

Extracts from the Common-Place Book of an Engineer.

PHILADELPHIA AND COLUMBIA RAILROAD.—Leaving the depot at the intersection of Vine and Broad streets, from which various branches pass to different parts of the city, the line extends up the valley of the Schuylkill through Pratt's Garden to the viaduct, a

distance of three miles. Various reports, arising from conflicting interests, had been made on the eastern termination of this road, prior to the selection of its present location. The one that has been adopted, appears to be the best suited to the nature of the ground, as well as presenting fewer objections than any other of the proposed routes. The viaduct crosses the Schuylkill just below Peter's Island. It is 1045 feet long, 41 feet wide, and 30 feet above the surface of the water. It is built on six piers of hammer dressed masonry, one of which is in 26 feet depth of water, and in addition to a double track of railway, affords ample convenience for both carriages and foot passengers. Immediately succeeding the viaduct, comes the Schuylkill inclined plane, the length of which is 2805 feet, and lifting 1 in 15. At the head of the plane is a steam engine of 60 horse power, with which is to be connected a "fan wheel" and "friction lever," to aid it in passing cars down the plane. By the report of the engineer, it will be found that it will be enabled to pass over 1920 tons for every twelve working hours. The line passes from thence over an undulating surface, requiring heavy excavations and embankments, through portions of Philadelphia, Montgomery, and Delaware counties, till it reaches the viaduct of Valley Creek. The alignment of this part of the road presents numerous curvatures, all of them on radii exceeding the minimum of locomotive power. A flat rail 15 feet long and 21.4 by 5.8, laid on two continuous lines of granite sills, well embedded in trenches of broken stone, forms the superstructure of this part of the line. The Valley Creek Viaduct is composed of a wooden superstructure, (Burr's plan,) on abutments and piers of rubble masonry. It is composed of five spans, the aggregate length of which, with the piers, is 592 feet. It is 18 feet wide, and from 35 to 55 feet above the surface of the ground. Immediately beyond the viaduct, the traveller catches the first glimpse of the Great Chester Valley, long esteemed to be one of the most beautiful and fertile sections of the state. At the distance of 21 miles from Philadelphia, the line is intersected by a branch road leading to Westchester, the cost of which was about \$85,000 for a single track. At 30 miles, a little to the south of Downingtown, it crosses to the East Brandywine, by a viaduct 465 feet long, and 25 feet high, on a construction similar to that of Valley Creek. Some distance farther, the line crosses the West Brandywine by a viaduct 535 feet long, and 72 feet above the surface of the water, resting on 4 piers of hammer dressed masonry. This viaduct is without a cover, the cars passing in fact over its roof, which is seamed and caulked, like the deck of a vessel. Still ascending the main valley of Chester, the line reaches the summit, which divides it from that of Lancaster. This place is known as the Deep Gap Cut through Mine Hill, and it is believed that for its size there is not another instance in this country of similar difficulties of execution. The cut originally proposed at this place, was 37 feet deep and a half mile long, but owing to the discouraging nature of the ground, abounding with slips, springs and quicksands, to counteract the evil effects of which, at the depth proposed, all the efforts of the skillful engineer and enterprising contractors had proved unavailing, and which, if ever counteracted, would

have most probably cost over \$300,000. It became necessary, in order to diminish the cutting, to raise the grade, which hitherto had seldom exceeded 30 feet per mile to 45 feet, and even now, though at only 8 or 10 feet deep, it required heavy piling and substantial platforms before the road could be carried through. Thence descending the Lancaster valley, the road crosses the Pequa, by a viaduct 150 feet long and 18 feet high, and soon after, Mill Creek by a similar construction, 550 long and 40 feet high. Thence it follows the general features of the country till it reaches the immense viaduct over Conestoga River. The piers are of rubble work, 60 feet above the surface of the water, the whole length of the platform being 1412. To economize in the width of the structure beyond that necessary for strength, only three lines of rails have been laid, giving all the convenience of a double, without the inconveniences of a short curve, and two switches rendered necessary by a single track. Not long after, the line enters Lancaster by a high embankment, the materials of which were obtained from the deep rock cutting in the town. The location, as well as the grade of the road, has been materially changed from that originally intended, the extra expense of which was defrayed by the town, in consideration of the advantages it thereby gained. From Lancaster the line passes through a beautiful section of the county of the same name, presenting no very great irregularities of profile, or difficulties of construction other than the viaduct over the Little Conestoga, 804 feet long and 47 feet high, not long after which it arrives at the summit of the Columbia inclined plane. The view that here presents itself of the broad and noble Susquehanna, covered with arks and vessels bearing the varied products of the North and West, and spanned with its magnificent bridge of more than thirty arches, and a mile and a quarter long, is such as amply to repay one for the day's journey over this "iron avenue to the West." The Columbia plane is 1800 feet long, with a rise of 1 in 20. The engine is of 40 horse power, which, taken in reference to the plane, is of the same capacity as that of the Schuylkill. From the plane the line passes through Columbia to the basin of the eastern division of the Pennsylvania Canal. Examinations and estimates have been made in relation to joining the line with the bridge, which have resulted in the proposition of an inclined plane, with horse power, running at right angles to the line of the bridge, and communicating with it by means of revolving platforms. The construction of this road was authorized by the Legislature in 1828, but owing to a delay in the appropriations, it is not yet finished, but there is every probability of its being completed by January, 1835. On the first ten miles the construction has already been described; on the remaining 72, the Clarence or Wigan rail and chair has been adopted, to be laid on stone blocks and locust sills. The sill is so disposed as to be at every 15 feet lineal on the straight line, and every 9 feet on the curves. The blocks and sills to be laid in trenches of broken stone, well rammed. On the newly formed embankments a superstructure of wood has been adopted in preference to the stone, on account of its easier adjustment. The cost of whole line, when completed for locomotive power, including the cost of all engines, will be \$3,595,809 98, or about \$43,851 per mile.

STEAM CARRIAGES.—The article to which the following refers, was published in the last number of the Journal, at page 420.

Col. Maceroni has addressed the following letter to a morning paper:

Sir,—You certainly have made a mistake in saying that the coach, on Saturday last, went at eighteen miles the hour, when it overtook and passed the stage, whose four horses were "put to their utmost speed, with a velocity comparative to that with which the stage coach would have passed a waggon."

Wyatt, of the Watford and Aylesbury coach, the one to which you refer, is very angry at your asserting that his fine team of horses were overtaken and passed in the manner you speak of by the steamer, when the latter did not perform more than 18 miles the hour! Wyatt knows the steamer well; he was once beaten by it going up Windmill-hill; and he says—and I say—and all the others say, that when the steam carriage overtook him, and passed him on Saturday, it was undoubtedly at a pace of more than 24 miles the hour.

We have many times done two miles in five minutes, and you shall see it done again whenever you are so disposed.

You show that the speed of the whole ten miles, including several stoppages and the turnpike, &c., was above fifteen miles the hour. Surely to overtake and pass a team of four fine horses at their "utmost speed," as we did, must have required more than eighteen!

But to set the matter at rest in your mind, I will keep a seat for you in the carriage on an occasion which will offer in a few days, of putting to the test, at their utmost speed, a chosen team of horses, a fourteen mile heat, on the most hilly and softest road out of London. I have the honor to be, sir, your most obedient servant,

FRANCIS MACERONI.

Wharf 19, Paddington-green, May 26, 1834.

Third Annual Report of the Engineer and Agent of the Boston and Providence Railroad Corporation,

Office of the Boston and Providence Railroad Co.
Boston, June 1, 1834.

To the President &c.

GENTLEMEN—On the periodical return of the annual meeting of the Stockholders, although from personal observation you may be said to be conversant with the daily progress and condition of the work, which, under your supervision and control, has been committed to my management,—in accordance with usage, the opportunity is embraced to review the past operations of the Company, and briefly to allude to its future prospects.

At the date of the last annual meeting, as you were, in my absence, apprised by Isaac Trimble, Esq., the principal Assistant Engineer of the Company, the location of the Railroad had been definitively established, and the construction of the same begun on the first twenty-two sections, into which the road-bed had been divided between Roxbury and Sharon, including a distance of seventeen miles, or extending to a point eighteen and three quarter miles from the City of Boston; that, although but comparatively little progress had been made in the graduation of the road-bed, "all contracts were being executed satisfactorily," and it was believed—from the absence of serious difficulties "not foreseen," or, not included in the deep excavations, embankments, &c., which your Board had very wisely concluded to encounter, (in order to surmount the elevation from the Neponsett Marshes to the summit of the dividing ground, which separates the waters of the Massachusetts and Narragansett Bays,) in preference to an inclined plane with stationary power, which, else, had been inevitable—as well as from the measures which had been duly taken to procure a timely supply of Iron Rails from England—that the portion of twelve to thirteen miles between the Neponsett Marches and Boston might be opened for travelling

during the past fall;" that the final location of an additional portion, extending for about thirteen miles further southward, from the summit towards Providence, (and to within about eight miles of that City,) was in progress, and about to be placed under contract; and that the remaining portion of the Road could and would be located, when further surveys had determined whether the preference were due to the direct route to *India Point*, or to that leading through Patucket to Providence. It was also stated, that the contracts which had been entered into were at less than the estimated cost, and that the actual cost of the graduation and masonry of the first division of the Road, or that extending to Sharon, and including by far the most expensive portion of the work, would not, in all probability, exceed that which had been originally anticipated—as was exhibited in the first Annual Report which I had the honor to submit to you.

Such was the condition of the work, and such the expectations entertained a year since. It is gratifying to be able to state, as it has been to you, and must be encouraging to the Stockholders to know, that in no essential particular have these expectations been disappointed. The formation of the road-bed, which includes the excavation, embankment and masonry, throughout the first twenty-two sections, has progressed, as was anticipated and the completion of the same was effected from Roxbury, through the Neponsett Marshes, within the time contemplated. The portion between Sharon and Attleborough, extending to within eight miles of Providence, was duly located, placed under contract, and has since been as rapidly progressing towards completion as is desired; and the remainder, between Attleborough and Providence, being located after the most careful examinations and surveys, (as will appear by the annexed Report of Assistant Engineer, E. S. Chesbrough,) is in the progress of construction to such extent as is expedient, till the question shall be decided whether to terminate the Railroad on the Massachusetts shore, opposite *India Point*, in the City of Providence, or, availing of the privilege which has recently been granted by the Legislature of Rhode Island, to cross the Blackstone River, and extend the road into and through the City of Providence.

The report of the Committee appointed by your Board in September last, "to make application to the Legislature of the State of Rhode Island, to enter and pass into said State with the Railroad, in such place as may be thought expedient," together with the charter which was eventually granted on the application of said Committee, is herewith submitted; and I would only add, in relation to the subject of the *southern terminus* of the Railroad, that while the privilege accorded was at least so far desirable that we should not be restricted to a termination of the Road on lands to which a price might be affixed, in proportion to their enhanced value, from the necessities of the Corporation, the terms proposed to your Agent, by the proprietor of those lands on the Massachusetts shore, (as you have already been apprized,) seem to be not only reasonable, but liberal on his part; and as those lands will, at least for the present, afford ample accommodation to the trade of the Railroad, it remains optional with us, and I should say much dependent on the cost of like accommodation in the City of Providence, whether or not the privilege of entering the State of Rhode Island shall be availed of. The intercourse between Boston and Providence, doubtless, will be the more facilitated the nearer the Railroad shall approach the centre of the latter City; but, terminating even in its vicinity, opposite *India Point*, it would still afford the most convenient avenue, and would, in consequence, command the travel between these Cities.

The main object of your Railroad, that of

effectuating the most safe, cheap, and expeditious transit of persons and merchandize between *Boston and New-York*, will, however, it is conceived, be, perhaps as fully accomplished in the one case as in the other. The Committee will, however, continue diligently such inquiries and negotiations as will in due time enable them, as empowered by your Board, "to select a south-western termination of the Railroad;" and, from the easy accomplishment of all parts of the work in the vicinity of Providence, the final use and completion of the Railroad will not have been delayed by the time consumed in making this selection.

The duties of a similar nature which were assigned by your Board to a special Committee, consisting as in relation to the southern terminus, of two Directors and the Agent, who were empowered "to select a depot in the City of Boston, and to purchase such lands as they might think the interests of the Corporation would require," were, after much negotiation, satisfactorily closed; and a report of their proceedings was submitted to and accepted by your Board, on the 7th September last.

They were fortunate enough to secure such a location of the Company's depot, that the Railroad will terminate "on the lands next south of the City's lands, at the south-west corner of the Common,"—a locality which it is believed all conversant with the subject concur in the opinion, combines sufficient advantages to entitle it to the preference which it received from the Committee. To attain all the advantages, however, which it was the object of the Committee should accrue to the Corporation, they extended their purchases so as to include thirteen different estates, containing about one hundred and thirty-two thousand square feet of land, with the right, as is contended, to form an additional quantity, by filling up adjoining flats to the extent of, say, seventy-five thousand feet—or the purchases of the Committee cover in all upwards of four and half acres; for which was paid the sum of \$92,110 67.

The object in making our purchases so extensive, was, that we were not aware precisely what lands might be wanted, and we wished to secure the benefit of obtaining them at a reasonable price, before it was generally known that we had decided upon this location. We had, in fact, decided upon it before we made any purchases, being satisfied that it was preferable, as a termination of the Road, to any other we could procure; and though it occurred to us that we should probably be able to dispose eventually of a portion of these lands, at an advanced price, yet this would not have influenced us to fix upon this location, had we not been convinced of its superior advantages, on the ground of public convenience and accommodation. Under these circumstances, we consider it was our duty to have availed of the opportunity to make these purchases for the benefit of the Stockholders; so as to be able to reduce the cost of what we should retain to a trifling sum, by the sale of the residue. The same motives influenced us to make a purchase of several estates in Roxbury, through some of which our Road passed in such manner as to occasion great injury, and to give the owners apparently a large claim against us for damages. These purchases include about six acres of land, a rope-walk, and five dwelling houses, and amount to about \$17,000. They may be sold, we think, at little or no loss, and perhaps to some profit.

We also purchased a mill in Sharon, which was essentially injured by our Road passing near it, but the site for it will be wanted by the Corporation for work-shops.

The formation of the road-bed across the "Full and Empty Basins" of the Boston Water Power Company, comprising what is termed the City Division of the Railroad, and extending from the Company's depot in the

City of Boston, to Roxbury, (a distance of one and three quarter miles,) was begun so soon as the negotiations for land in the City of Boston had terminated—a decision on which point, as the Board is aware, was essential to determine the direction (or location) of the Railroad from Roxbury towards Boston,—the delay consequent on which alone prevented the entire completion of the City Division during the past year. This portion, like others, has, however, steadily progressed, and is now ready for use, and like all the other sections, has been graduated for a double railway, the road-bed, in general, being formed similarly to that over the *Fowl Meadows*, (Neponsett Marshes,) by excavations from the adjoining marsh. Instances occur where piling has been necessary to insure stability; but in such cases, to prevent decay and render the road-bed permanent, the piles are cut off below the surface of the mud, or water, (as the case may be,) on which rough masonry has been constructed to the level of the road-bed; or, where the level of the road-bed was too elevated above that of the Basin, for this mode of construction, to prevent the decay of the piles and to sustain them laterally, they have been covered by an embankment of the soil from the adjoining marshes.

This has proved to be comparatively a difficult and expensive division of the Road, although not more so than had been anticipated; but it is at length completed, and as the Stockholders, ere this Report shall have been submitted to them, can testify, it now affords a permanent avenue over the Full and Empty Basins between the City of Boston and Roxbury. From this latter point, as has already been stated, the road-bed had for some months past been graded to the township of Canton, beyond the Neponsett Marshes, and a single track of rail-way is now ready for use from the Company's depot in Boston for the distance of eleven and a half miles towards Providence. That this was not in readiness, as had been anticipated, during the year 1833, however immaterial it has proved to be, (for reasons which will be found, in my opinion, satisfactory, as stated in the subjoined letter from the Agent to a Director in New-York,) I will merely remind you, was because of the delay in the arrival of the iron rails, on which we are dependant for a supply from Great Britain, and because of the late period of the year when the negotiations for land in the City of Boston terminated.

Touching the supply of iron rails, the orders for which have since been issued by me, on the authority of your Board, (as will appear by the subjoined correspondence,) I have the satisfaction to say, we have every assurance of the timely and faithful execution of those orders, which require, in all, the delivery during the coming summer, in Boston or Providence, of twenty-five hundred tons. Of this quantity, nine hundred and fifty tons have already been received, and laid down upon the road-bed, and to complete even the single track which has been begun, there will be required the additional quantity of about twelve hundred tons. This estimated quantity presupposes the continuance of the present rail, which, however heavy in comparison with any other rail elsewhere used—for reasons which I had the honor to state to you when I first urged its adoption, and from much reflection on the subject subsequently, (to say nothing of the experience on the Liverpool and Manchester Railroad, which has induced the Directors of that Company, in their last Annual Report, to advert to the necessity or even a heavier rail than that used on their rail-way,) I have no hesitation in recommending to your continued preference. The form and dimensions of this rail have, however, been so fully discussed on former occasions, that it is unnecessary at this time to enlarge upon the subject; and for a knowledge of my views, reference may be had to my several

Reports hereto annexed, with my correspondence with our Agents in Great Britain. Suffice it, that I am aware of no exception to this rail but its weight and consequent expense, which should be obviated in the fact that it has *but the requisite strength*, and that the greater perfection of the rail-way, consequent on the use of such a rail, will more than compensate for the increased cost, which is only to be avoided by the substitution of an inferior article. It may, however, be well to remind the Board, and through them the Stockholders, that even with the use of this rail, and with all its attendant advantages, we continue to be confident that the actual cost of the Railroad will hardly, if at all, exceed that which was originally estimated; and that the cost of the rail-way itself, (as will appear by statements appended to this Report,) will fall considerably within my original estimate—the causes of which reduced cost are satisfactorily explained in the substitution of wooden sleepers for the stone blocks, which, prior to the commencement of the work, it had been supposed would be preferred.

With the authority of your Board, I should, therefore, take an early opportunity to extend existing orders for rails, so as to insure a timely supply during the current season of the residue, which will, ere long, be wanted to complete the single rail-way, with occasional passing places, throughout the route from Boston to Providence. It is hoped and believed that on or before the next annual meeting of the Stockholders, I shall have the satisfaction to announce to you the completion of the Railroad, in so far that its use may be availed of for the transportation of passengers and goods, between those cities. When this desirable result shall have obtained, a very important link in the chain of inland communication, which is to connect our Atlantic Cities, will have been supplied; and the certain and increasing revenue which must accrue, will, I feel confident, at least equal the most sanguine expectations of the Stockholders.

It is quite impossible, and the attempt would seem futile, to estimate with precision the amount of trade which in future years, with all the increased facilities of intercommunication between the great emporiums of the commerce of our country, shall seek the natural channel to be afforded by your Road between Boston and the extensive territory east of it, and the City of New-York; and we should, therefore, in preference, present the fact that *the existing trade* will amply compensate the enterprising projectors of the Boston and Providence Railroad, and that *it cannot be diverted elsewhere*.

Pending the completion of this railroad, an interesting question will suggest itself to the proprietors if they may not *now* begin to realize a return on their invested capital, from the opening to the public the use of that portion of the road which, as has been stated, has already been completed. I am quite aware of the practice in similar cases, and the general impression that this practice is profitable; yet my experience leads me to doubt the accuracy of this conclusion. Crowds doubtless do, and would probably continue to, as curiosity might dictate, occasionally through the railroad; but, however, at such times, we should enjoy an *active*, I apprehend, without the impulse of business to attract them, it would prove to be a very *fluctuating* trade; and, under such circumstances, I am satisfied the result would be by no means profitable. I do not mean to say that in this I cannot be mistaken, neither that the experiment may not be worthy your consideration; but, entertaining the opinions which I have expressed, I attach the more importance to a project, which, if assented to, would at an early day, in connexion with the turnpike, bring into certain and more steady, and, therefore, more profitable action, a portion of the railroad. I allude to the construc-

tion of a *branch*, which, diverging from the main stem, about eight and three quarter miles from the Company's depot in Boston, would afford a railway communication between Boston and the flourishing village of Dedham—a charter for which having, on the application of this corporation, been granted by the General Court of Massachusetts, at its last session, the requisite surveys have, as required by your order of April 14th, 1834, been subsequently made under my direction, by Assistant Engineer Barney, to whom that duty was assigned by me. His report, with the drawing illustrative of the same, and an approximate estimate of the cost, is hereto appended; from which it will be seen, that the length of the branch is but two and one-third miles, the inclinations sufficiently favorable for the use of locomotive engines, and that the cost of constructing the same with a single railway, in the manner in which I should propose to build it, will be about \$30,000.

If commenced with all convenient despatch and prosecuted vigorously, it may be entirely completed in all the coming month of September.

I subjoin the communications which I have received from those gentlemen resident in Dedham, and conversant with the intercourse which now exists, from different sources, between that place and Boston, from which it would appear that, even after the completion of the main stem, the trade of this branch will in all probability prove lucrative. As the rails shall continue to arrive from England, (and we are almost in daily expectation of a further supply,) they will be laid down with all practicable despatch, and the railway extended beyond the Neponsett Meadows, to its intersection with the county road in Canton, in the vicinity of the Stone Factory, on the eighteenth section, (fifteen and one quarter miles from Boston;) to which point the road bed is now prepared for the reception of the rails. It may then become a question, if the railroad may not thence be profitably used for the accommodation of the south-eastern portion of the State, in its intercourse with Boston, including the travelling from Taunton, Fall River, New Bedford, &c.; and if, in addition to this, the public stages which now pursue the turnpike between Boston and Providence, may not, in preference, travel the road through Attleborough, Foxborough, Sharon, to Canton, and thence avail of the railroad to Boston. This, I am inclined to think, will be found by the proprietors of public coaches expedient, and whenever it shall be, we shall be—as we are at this present—prepared with railway carriages, and the necessary moving power to accommodate the public.

The eighteenth and nineteenth sections, which together include a distance of two and one quarter miles, it is hoped will be graduated, and the construction of the Canton Viaduct, which intervenes between these sections, be completed in all the current year; and, as the Board is aware, it was always apparent from the nature and extent of the excavation and embankments on these sections, and the character of the intervening structure, that the portion of the road must necessarily be the last completed.

The character of the Canton Viaduct, and the terms of the contract for the construction of the same, will be seen on reference to a copy of the contract.

From the end of the nineteenth section (sixteen miles from Boston,) to the vicinity of India Bridge, (in or opposite Providence,) where, for the present, we will suppose the railroad to terminate—including a distance of twenty-five miles—as is exhibited on the profiles shewing the monthly progress of all parts of the work, much of the road-bed has already been graded; and the whole of it will (with the exception of the thirty-seventh section, the contract for which provides that it be done by the month of November,) certainly

be during the coming autumn; and measures having been taken to obtain not only the requisite supply of rails, but all the materials required for the railway, the operation of laying the rails will also be continued, between the eighteenth section and Providence, with all practicable despatch, when from time to time the rails shall arrive, and this portion of the road-bed be ready for their reception. In fine, I repeat with confidence my belief that the use of the railroad, through its whole extent, will not be postponed beyond the return of the next annual meeting of the stockholders, or at farthest at a very early day subsequently.

All diligence shall meanwhile be practised, to perfect the moving power and the machinery appertinent, and to place all parts of the work in a condition to be able to transport with celerity and safety. The annexed return of Mr. Gibbs, the assistant superintendent of contractors, who is also charged with the superintendence of the moving power, enumerates fourteen passenger cars, which have already been provided—eight of which were built by the Company at their depot in Boston; as well as a partial supply of burthen cars. The number of both will of course be increased with reference to our future exigencies.

The following is a general abstract of all my disbursements in the service of the Company, from the commencement of my connection with it up to the expiration of the last quarter, ending March 31st, the vouchers for which have been submitted to, and passed to my credit, by the treasurer.

General abstract of disbursements on account of purchases and expenditures, made by William Gibbs McNeill, Agent and Engineer of the Boston and Providence Railroad Company, as per vouchers rendered to the Treasurer, up to March 31, 1834.

Nature of Disbursements.	Purchase.		Expenditure.		Total.	
	Dols.	Cts.	Dols.	Cts.	Dols.	Cts.
Graduation - - -	5,343	87	173,261	88	178,605	75
Railway - - - - -	2,274	90	7,400	00	9,674	90
Lumber - - - - -	22,453	32	2,237	89	24,691	21
Land - - - - -	40,993	68			40,993	68
Engineer department	750	38	33,031	52	33,781	90
Locomotive and Cars	4,221	57	2,758	44	6,980	01
Quarry in Canton	1,000	00	4,544	38	5,544	38
Bridges - - - - -			6,345	77	6,345	77
Contingencies - - -	351	56	970	45	1,322	01
Teaming - - - - -			2,258	27	2,258	27
Fencing - - - - -	342	58	1,396	07	1,738	65
Masonry - - - - -			16,800	78	16,800	78
Total - - - - -	\$77,731	86	251,005	45	328,737	31

For a minute statement of the items of the several objects above enumerated, to which the funds entrusted to me have been applied, and for the system of accountability which has been adopted and rigidly adhered to, I beg to refer to the journal of proceedings of the engineer department of the Company, the ledger, requisition book, &c., among the archives of the Company. They are in charge of Wm. Raymond Lee, who has ably and most faithfully assisted me in all that relates to the various disbursements on account of construction; to whom, as well as to the numerous other gentlemen with whom I have been associated in your service, I take pleasure in acknowledging my obligations for their cheerful and unremitted exertions, to aid me to promote the interests of those who have honored me with their confidence.

To meet the current expenses, and those anticipated prior to the annual meeting of the stockholders, the residue of the capital of the corporation will be required, which if assessed in monthly instalments, it is thought will provide the necessary funds. Which is respectfully submitted, by, Gentlemen, your obedient servant,
WM. GIBBS MCNEILL,
Agent and Engineer of the Company.

The following extract from the written contract, will show the character of the Canton Viaduct on the Boston and Providence Railroad:

It is understood that the said viaduct shall

commence at a point 10.5 feet north-east of station marked 670, of the centre line of the Boston and Providence Railroad, and extend 613.5 feet on said centre line, to a point 3 feet south-west of station marked 676, crossing the mill-pond of the Stone Factory, so called: that the said viaduct shall terminate at each end by an abutment and circular wing walls: that the basement wall shall, in every part, be laid on a solid foundation—shall extend entirely across the base of the structure, and project from 1 to 2 feet beyond the exterior face of the superstructure, as may be directed.

The said basement wall shall be constructed of the best dry masonry, and the stone of such dimensions as shall be approved of by the agent or his assistant; the said basement wall shall in every part commence at least 3 feet below the surface of the earth, except where solid rock shall be encountered, and shall be raised to such elevation as the agent or his assistant may direct.

The superstructure shall consist of two walls, extending the entire length of the viaduct, connected at intervals of 27½ feet by buttresses of 15½ feet thick, extending transversely across the walls, and projecting 4 feet beyond their faces—the main walls to be 4 feet thick, 4½ feet below the grade of the road at all points, and to have a battre on their exterior faces of 1 foot in 48 feet, or 1 inch to 4 feet—the interior faces to be perpendicular, and to have a clear of 4 feet; the exterior faces of the abutments and buttresses to have a battre conforming to the faces of the walls, viz., 1 foot to 48 feet.

There shall be one arch for a road-way, situated near station marked 674, the span of which shall be 22 feet—(the distance between the buttresses at this point shall be 26 feet, to conform thereto)—and seven arches of 8 feet span each, for the passage of the water in the pond. The impost of the arch over the road-way shall be at least 12 feet from the surface of the road—the arch semi-circular, and the voussoirs or ring stones 2 feet long, and not less than 15 inches thick; the intrados and vault of the arch to have the same character, and dressed to conform in appearance to the exterior surface of the walls; each arch over the pond to be situated midway between two buttresses—the imposts to be at least 6 feet above the surface of the water when the pond is full; the voussoirs to be 18 inches long, and not less than 12 inches thick, and the intrados and vaults of the same character as that of the road-way.

The entire superstructure shall be constructed of the best range work, laid in mortar; the beds, ends, and one inch round the faces of the stones, dressed; each and every stone in a range, shall have an equable bearing, and shall not have a rise of less than 16 inches; the stones in each course shall have a rise equal to the face stone of that course; all inequalities or cavities, formed by the irregular ends of the large stones, to be filled with small stone and mortar, and made solid. The ranges in no instance to be broken between the buttresses, but shall extend so as to include one buttress at least. There shall be a sufficient number of headers in each range to secure the stability of the work, and placed at such intervals as the agent or his assistant shall direct; and stone not less than 7 feet in length, and of sufficient thickness, shall be placed at intervals between the buttresses, as binders, to unite the two main walls, and projecting into the wall 18 inches beyond the interior faces.

The exterior surface of the abutments and wing walls, shall be similar to the exterior surface of the main walls of the superstructure, and the stone forming the faces of the same laid in mortar; the stone of the interior of the wing walls shall be laid dry—but in every other respect shall conform to the general character of the superstructure, viz., of the best range work, each stone having a solid bed and bearing, and of dimensions suitable to

range with the stone forming the face of the course.

The buttress shall be carried up to within 7 feet of the grade of the road, where an impost projecting about 6 inches, shall be laid, and arches, forming an arc of a circle, with verse sines of 4 feet each, shall be sprung up from buttress to buttress, the voussoirs of which shall be 18 inches through, and the character of the work similar in all respects to the arch over the road-way.

The entire superstructure to be surmounted by a coping 18 inches thick, projecting one foot beyond the exterior faces of the ring stones of the arches, and formed of stone of such dimensions as the agent and engineer or his assistant may direct, and the seams of the coping stones shall be filled and closed with such cement as shall be durable and impervious to water.

In the Journal of last week it was stated that Mr. Burden's engine was built under the direction of Mr. Snodgrass, of Glasgow. This is not exactly correct. He had the direction of the cast iron packing, and proposed an alteration in the valve; but, otherwise, it was built under the direction of Mr. T. B. Stillman, of Novelty Works, in this city.

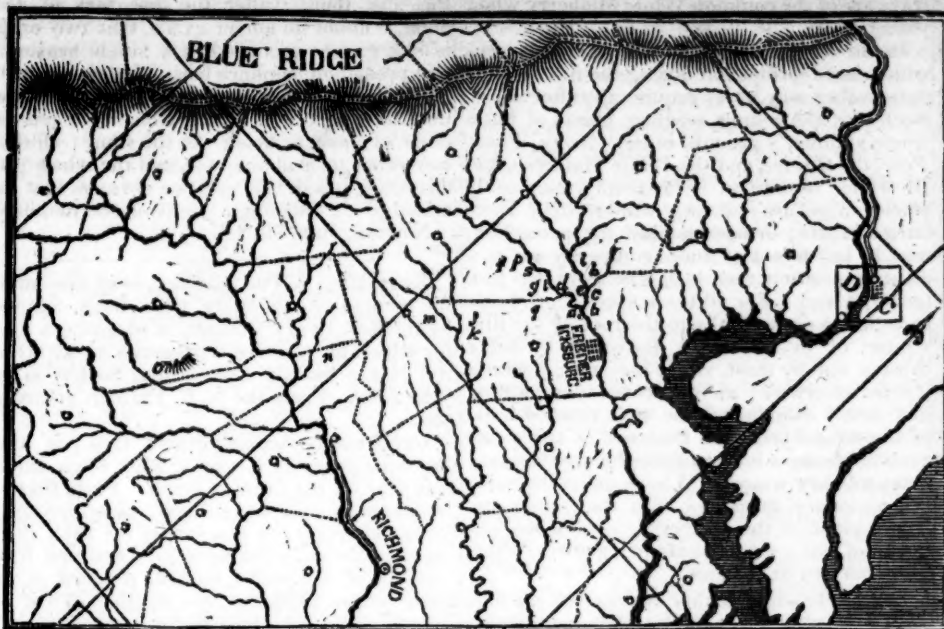
ON OILING LOCKS, DOOR LATCHES, &c.—We have somewhere read of a gentleman who was in the habit of taking a nap sometime during the day; but near his couch hung a door on rusty hinges, which grated so harshly when moved as always to break his slumbers; and it was remarked that the labor of one minute with a feather dipped in oil, would have prevented the disturbance. He then might have quietly taken his siesta. It was too trifling a concern, however, to require immediate attention: it could be done at any time; and why should he get up and do it then? Like a philosopher, he would not move without a sufficient motive; and week after week, and year after year, he was reminded of Milton's sublime conception of the doors of another region.

We have been in the habit of frequently oiling the locks and latches of our doors, not only as a matter of comfort and convenience but of strict economy—because we are persuaded they will last much longer when they are shut and opened without strain or jar. Owing to forgetfulness of the time when it was last done, however, the latches on two doors, when pushed to, had refused to rise, and consequently would neither shut closely nor fasten. It had become necessary to raise them by hand. At first we concluded that some roughness, occasioned by wearing, which we could not well explain, was the cause of the difficulty, and we thought of using a fine file to remove it; but happily we first tried the experiment of an oiled feather, and we were delighted to find every obstruction vanish: all moved like clock-work.

A wooden latch was the fastening for a door exposed to the weather; and it had lately been refitted so as to rise with great facility. A single shower of rain, however, put a stop to the movement; and it would not shut without the assistance of the hand. We therefore applied a few drops of olive oil—the spell was destroyed; and though it has rained much since that time, the latch rises and fastens without the least trouble.

Who of our readers have grating doors, or locks and latches that have become refractory? In such cases we should point to the oil flask.

LEAD MINES.—No lead mines in the world are supposed to be richer or more abundant than those of Missouri, on the borders of the Mississippi. The ore is often found within two feet of the surface of the ground, in detached masses, weighing from one to eighteen hundred pounds. The annual produce is calculated to be three millions of pounds.



MAP OF THE GOLD REGION OF VIRGINIA.
[From a Correspondent.]

REFERENCES.

a, United States Gold Mine,	Spotsylvania county.
b, Rappahannock	Stafford
c, Rattlesnake	do.
d, Culpepper	Culpepper
e, Millbank	do.
f, Virginia	Orange
g, Vaucluse	do.
h, Liberty	Fauquier
i, Union	do.
j, Johnson's	Spotsylvania
k, Dixon's	do.
l, Melville	Orange
m, Tindler's	Louisa
n, Goochland	Goochland
o, Booker's Willis mt	Buckingham
p, J. Payne's	Orange
q, Greenwood	Spotsylvania

This map exhibits a condensed view of the gold region of Virginia, and is taken from a larger one belonging to Mr. F. Shepherd, of New-Haven, who has spent some months in surveying and exploring this interesting portion of our country. We say interesting, because the amount of gold annually obtained in the United States, is estimated in millions of dollars; and this amount is rapidly increasing when, comparatively speaking, the surface only of the ground has been disturbed in getting this precious metal.

We learn from Mr. S. that the undue excitement which the first discovery of gold creates in the minds of all classes, is now at an end in Virginia, and the business of getting gold is assuming a settled and systematic character. The farmer now goes on with his farming, and the experienced miner with his mining, and in this way each is mutually an aid to the other.

As to the richness of the Virginia ores, Mr. S. has given us full satisfaction, by simply pounding them in a mortar and washing away the sand in our presence, when, to our surprise, a large proportion of metallic gold appeared in numerous and beautiful grains, and this, too, from specimens which had no gold visible on the outside.

The following is an extract from the report of Mr. Shepherd:

"I am decidedly of opinion that Virginia is destined, sooner or later, to become a rich and prosperous mining country; that whenever skill and capital shall be judiciously applied, (in the language of an able and beautiful writer,) she will one day be to the country what Cornwall is to England, the seat of prodigious industry, and the source of individual and national wealth."

In coming to this conclusion I do not lose sight of the great natural advantages which Virginia possesses over other mining districts in the United States, and throughout the world. It will be seen by the map that by a little more than half a day's ride, any one can be trans-

ported from the city of Washington on the Potomac, to the gold mines on the Rappahannock, on the banks of a beautiful river made navigable by locks and dams, a distance of ten miles to tide-water and steamboat navigation, commencing at Fredericksburg, which is a busy inland town, at all seasons supplying a plentiful market. Add to this the very low price of provisions and labor, the vast abundance of wood and timber, the great number of water powers easily created upon the numerous streams, the peculiarity of the soil and earth as affording facilities for excavation, (since steam is now applied to all kinds of digging,) and finally the beautiful development of the rich gold veins, said by those who have been observers in both countries, by far to excel Mexico, South America, or even Russia, so much celebrated of late for her gold mines. These veins are composed of quartz commonly called white flint, from one to four feet in thickness, generally perpendicular in the earth like a wall, supported on both sides by soft talcose slate, and extend from the surface to an unknown depth. It is not uncommon to find gold in the broken fragments of the veins at the surface, and it has also been found at the depth of 160 feet increasingly rich. The gold district lies in that part of Virginia between the tide-water and Blue Ridge, where the atmosphere is dry and exhilarating, the climate mild and agreeable, the water well tasted and pure, the inhabitants of that class so long and so justly famed for their hospitality and refinement, and for whose convenience, the great National or Southern Railroad is about to pass by them as it were at their thresholds.

Still, with all these natural and extraordinary advantages, I feel it my duty, continues Mr. Shepherd, to give my friends and fellow-citizens of New-England, a few words of advice by way of caution. That there is a very large amount of gold in the great State of Virginia, and that this large amount of gold may be extracted so as to afford a large profit, is clear to a demonstration; and I believe that this section of our country is worthy the attention of northern enterprise and capital. Yet it frequently happens that many persons have an idea that wherever gold is discovered, if they can but get possession of the lands, no matter at what price, their fortune is made for a certainty. This foolish impression has ruined many a man. The temptation is so great that where a person wishes to sell his land as gold land, and cannot find gold upon it, in order to effect his object, he will sometimes bring gold sands and ores from a distance, and bury them upon his own grounds, which of course the purchaser finds out to his sorrow when too late. Again, some persons, on finding a few grains of gold, suppose that if they dig deep they

will surely find the precious metal in masses and blocks. It is needless to add that such visionary day-dreams are rarely realized—still many are sanguine enough to pursue the chance with great ardor.

To those persons who engage in this business for the purpose of speculation, I would say that they will only be benefitted at the expense of others, and will injure the mining interest of the country more in a few days than they can possibly repair in many years.

Finally, persons ought not to engage in this business without previous skill and experience. It is obviously unsafe for them to do so; and here is the cause of so many failures of companies and individuals. Gold mining is as much an art or trade as iron mining. What company of farmers would undertake of themselves to get iron from the ore? And what would be the probable result of such an undertaking? What would be the result if this same company of farmers should undertake to work the ores of zinc, so rich and abundant in this country? I have no doubt you anticipate the result correctly; and the same result is to be expected in their undertaking to get gold. Some persons in their ignorance suppose that if they expend a large amount, or venture a large sum, that they shall certainly realize something in return. Such visionary men lose their all, generally; whereas, in the hands of a discreet and experienced man, every cent of that money, like the well directed blows of the axeman, would be turned to a good account; and instead of a loss he would reap a reward of an hundred fold. In proof of this I have known a man to expend ten hundred dollars and get ten thousand dollars of gold for his reward, and from an examination of his lands, believe that he might labor all his life in the same prudent way, and with the same good success. Again I have known another man in the same situation precisely, expend the same sum and get nothing but a load of debt upon his shoulders instead of gold. Now will you say that these mines ought not to be worked? No, you will say let them be worked by honest, experienced and prudent men. Let this be done, and the capitalist will find his money profitably employed, and the millions of gold in Virginia will be made to circulate and gladden the hearts of millions of the human race now pining in want and "perishing for lack of knowledge."

HEAT.—It has been said by an astronomer, that a globe of red hot iron as large as our earth would scarcely cool in 50,000 years. If this be true, then the comet which appeared in 1680, cooling a hundred times as fast as the hot iron, its heat being actually 2,060 times greater, would take a million of years to become perfectly cool, admitting it to possess a quantity of matter equal to that constituting this earth. That the comet alluded to was solid, cannot be doubted, as Sir Isaac Newton clearly demonstrated that in its passage through the neighborhood of the sun, it must have been dissipated, had it not been of solid compact substance. In its perihelion, Dec. 8, it was observed to be to the distance of the earth from the sun as 6 to 100. The sun's heat in the comet, at that time, was to the heat with us at midsummer as 1,000,000 to 36, or as 28,000 to 1. Had the comet consisted of exhalations of the sun, as some astronomers of the day intimated, it must have been completely dissipated; for the heat of the sun, it is generally allowed, is as the density of his rays, or in other words, reciprocally as the squares of the distances of places from the sun.—[Scientific Tracts.]

LIGHT.—Dr. Nieuwentyt has computed that, in a second, there flows 418,660,000,000,000,000,000,000,000,000,000,000,000,000 particles of light out of a burning candle, which number contains, at least, 6,337,342,000,000 times the number of grains of sand in the whole earth, supposing every cubic inch of the earth to contain a million of grains.

AGRICULTURE, &c.

SILK MANUFACTURE AND MORUS MULTICAULIS.—About the year 1824, M. Perottet, a distinguished travelling botanist, introduced this valuable plant into France. He procured two specimens at Manila, the capital of the Philippine Isles, and carried them to the Isle of Bourbon, and from thence into Cayenne and France. Now there are millions in Europe, Asia, and America growing from those two plants; and in a few years, there will be additional millions. From an article in the New-England Farmer, by Wm. Kenrick, we extract the following:

The sudden and extraordinary extension of the silk manufactures, both in France and in England, during the last ten years, has been mainly ascribed to the machine invented in France by M. Jacquard; and the powerful impulse thus given has been assigned to the *Jacquard Loom*. This loom is stated to perform all those labors which had heretofore been exclusively confined to the most skilful hands, with important economy of time and labor in the preliminary steps, and is so decidedly superior to all other looms, for all the curious varieties of figure-silk weaving, that it has superseded them all, both throughout France and England.

Those resources, the millions we now annually expend for silks, the productions of foreign industry, and of foreign policy, draining our country of its treasures—those vast sums should be preserved to our citizens. This industry and resource of wealth must not be compromised nor bartered, nor sacrificed to rival and particular interests, or to the interests of rival nations. The cultivation of silk being in no wise exclusive, but a great and general interest, alike adapted to every region of our country, from the north to the extreme south; from the Atlantic to our territories which are bounded on the Pacific ocean—it demands that equal share of protection which has been bestowed on cotton, on iron, on tobacco, and on the productions of the sugar cane. But the encouragement of the cultivation of the Mulberry, and of the growth of silk, in the *United States, as a resource of Agriculture*, seems not to have formed any part whatever of what is called the "The American System."

The enterprise, the fertile invention, the noble efforts of individual exertion, have already accomplished much, but the field is very broad and of vast extent; much yet remains to be done. That industry which still slumbers: that portion, which unawakened is now lost, being alone more than sufficient to accomplish all, if once aroused and rightly directed—more than sufficient to recover again those very considerable sums, the millions so prodigally expended, with interest an hundred fold.

By those unceasing toils and mighty efforts, and matchless labors, for which our people are so distinguished, the millions thus recovered will not only be their just reward, but will add to the substantial wealth of the nation, and to the glory of the whole Republic. * * *

In our own country there may yet perhaps be some who would advance the question whether his most desirable plant will endure the winters of northern climates. At New-York, on Long Island, this mulberry has sustained, unprotected, the rigors of seven winters, as I am informed, and the extraordinary winter of 1831-2, which destroyed so many trees hitherto deemed hardy even to the root.

I have indeed sanguine expectations, that the *Morus Multicaulis* may prove as hardy in our climate, as the peach tree, which was originally from Persia, or the cherry tree, when once their roots have become established. Its vegetation being rapid and luxuriant, and prolonged to a later period in autumn than that of most other trees, or till the tender and yet vegetating tips of the twigs are checked by the frost, these extreme ends will generally be lost, as they al-

ways are of the common White Mulberry when young.

In our climate, there are many kinds of trees which need protection during the first winter, though they may never require any afterwards. Such are the young seedling plants of but a single summer's growth, of the *Cherry, Plum, Pear, the Quince, and the White Mulberry, &c.* all which require to be carefully, compactly placed in cellars; during winter, their roots buried in soil; or occasionally, for protection, may be laid in out of doors compactly and in a slanting position, their bodies being in part protected by soil. For all these species are liable to be killed occasionally to the root by the first winter, or to be utterly destroyed by being thrown out by frost, yet in the second winter it is far otherwise; their roots becoming strong and firmly established, the well ripened wood of the second year, and the wood of two years growth becomes indestructible by any but very extraordinary winters. I have taken the same precautionary measures with the young and tender plants of this Mulberry, so valuable—the layers of but a single summer's growth, which are separated in autumn.

I will offer some further evidence of the hardihood of this plant. But the experiments which are now in progress elsewhere, as well as here, on a more extensive scale, will, as I trust, soon enable us to put this subject more fully at rest.

Very late in the spring of 1833, more than an hundred young trees of the *Morus Multicaulis* were set out on the place of S. V. S. Wilder, Esq. in Bolton, Worcester county. The soil springy, the exposition cold, and sloping to the north; Mr. Joseph Breck, a distinguished botanist of Lancaster, the town adjoining, having especial charge of these plants, has lately very critically examined them. Thus unfavorably situated, and unprotected, they have borne the last winter without injury, except only the very tips of the twigs. Mr. Breck is persuaded that they are even harder than the common White Mulberry, since some hundred of the latter, which stood very near, were killed half way down to the ground by this same winter.

I have just received a letter, of the 30th ult., from John Gordon, Esq. a public spirited gentleman, who has, during the last year, made trial of the *Morus Multicaulis*, at Hampstead, N. H. These plants grew well during the summer and have borne well the winter, and are now luxuriantly vegetating to within two or three inches of the tips. Mr. Gordon is now making trial of the White Mulberry, and the *Morus Multicaulis*, in the city of Portland, in exposed situations, also of the silk worm, confident they will all succeed well, and that the culture of silk will answer well in that climate.

Although the Mulberry flourishes most luxuriantly in a moist and rich soil, and protected situation, yet the leaves in such soils and situations are more crude, and not of a quality so nourishing. Besides, the growth of the tree in such situations being much more rapid, the wood is consequently more tender and more liable in northern climates to be killed by winter; and authors seem to be agreed, that the proper soils for the Mulberry tree are dry sandy, or stony; and trees on dry, light soils, and situated on the open plains, and on hills the most exposed to cold winds, will generally be found to suffer least of all from the effects of winter. Such appears to have been the case in 1831-2; the ravages of that destructive winter seem to have been generally confined to trees growing in particular situations and soils. Even delicate trees and plants, the natives of more southern climes, become more hardy, and capable of supporting the northern winters, by being planted on the north side of buildings and fences, and in their shade. The exposure to the most intense degree of cold, in such situations, is more than compensated by the protection which is thus afforded to the plants during winter, from the pernicious and far more destructive rays of the sun.

The prediction, in 1830, of the late Dr. Felix

Pascalis, that, "after the discovery of this plant, a doubt no longer exists, that two crops of silk may be produced in a single season;" this prediction has since been fulfilled—its truth confirmed by experiment—the soil and cultivation, the habitations for the successive generations of insects being yet the same: all thus converted to a double use, and the whole production doubled. It must be obvious, that the actual profit thus augmented must be manifold. Newton, June 7th 1834.

RUTA BAGA.—The following is an account of the method of cultivating Ruta Baga, adopted by the Rev. Henry Colman, in obtaining a crop for which he received a premium of \$20 from the Massachusetts Agricultural Society in the year 1830. From the N. E. Farmer, vol. ix, p. 284.

Gentlemen,—Accompanying this you have the certificates of a crop of Ruta Baga, raised this year on my farm in Lynn. From these it will appear that on an acre, measured by a sworn surveyor, on one side of the field, there were gathered 741 baskets full; and that forty baskets of the above named, weighed at the town scales 2750 lbs. net weight. This, allowing 56 lbs. to a bushel, the standard weight assumed by the Society, would give a crop of 903 bushels to the acre.

The turnips were planted on the 29th of June and 2d of July; about one pound and a half of seed was used for the acre; and they were gathered and stored in cellars and in the barn, in the last part of November.

The ground on which they grew is a good soil, neither wet nor dry, and bore the last year an abundant crop of onions, and corn the year preceding the last. It was well manured at both times, and in fine tilth. It was manured with at least six cords to the acre of barn-manure the last spring, and sowed again to onions; but the seed entirely failing, it was ploughed, harrowed, furrows struck out, and about eight cords of barn-manure spread in the furrows; ploughed again, so as by a back furrow to form a ridge over the manure, and the seed sown with a small drill-harrow on the ridges, making the rows about twenty inches asunder. As soon as the plants were of sufficient size, a drill-harrow, with small shares fixed to it, to cut off all the weeds, was passed through the rows: and the plants thinned with a small weeding-hoe to the distance of about eight inches apart, and the vacant places filled up by transplanting from the supernumerary plants. They were once more harrowed and cleaned, which was a very small labor; and owing to the very unpropitious weather, were not harvested until very late. Some of them were very large; one weighed 15 lbs., and many were nearly as large. The exact expense of cultivating the acre cannot be estimated, as it was intermixed with other farm-work; but the whole, from the sowing to the gathering, was not two-thirds of the labor usually bestowed on planting, cultivating, and gathering an acre of potatoes.

My Swedish Turnips the last year, of which I raised considerable quantities, were fed off to my oxen, dry cows, young stock, and fattening sheep. To the cattle they were of very great advantage; and for feeding sheep, they proved the last year, by an accurate account, worth from ten to twelve and a half cents per bushel.

The man who has the care of my stock, considers them as among the most profitable feed which can be given, either to fattening or to store-cattle. Three years' experiment has increased their value very much for these purposes, in my own estimation.

I am, gentlemen, very respectfully yours,
HENRY COLMAN.

A correspondent in the N. E. Farmer, vol. xi, p. 277, writes thus:

"A wish to have others profit by my experience has induced me to send you, Mr. Editor, half a sheet of remarks on the culture of the Ruta Baga, as a food for domestic animals. I have cultivated from half an acre to three acres

of this root every year for thirteen years in succession, and feel competent to give rules for its culture, and confidence in recommending it as a valuable and profitable crop.

'The soil must be rich and dry; and the more it inclines to a sand loam the better. Clay is the worst, and wet soils will not answer at all.

'Preparations.—My general practice has been to manure well a piece of pasture, or clover ley, from which the hay has first been cut, plough it handsomely over, and harrow it well.

'Sowing, &c.—I sow in rows, at two and a half or three feet, with a drill-harrow. The sooner the preceding operations succeed each other the better. I have sown broadcast, but the expense of thinning and culture is increased. A man will drill in three or four acres a day. We allow a pound of seed to the acre, though half this, properly distributed, is enough. Sow from the 26th of June to the 10th of July.

'Culture. I use a cultivator, that may be graduated to the space between the rows, drawn by a horse, as soon as the plants can be well distinguished. This is repeated in a few days, back and forward, and the implement carried so close to the drills, as to leave only strips of from four to ten inches, which are then thoroughly cleaned with a skim hoe, and the plants thinned to eight and ten inches distance. The cultivator soon follows for a third time, and if necessary, the skim-hoe, when the crop is generally left till harvest; the great aim is to extirpate the weeds, and to do this while they are small.

'Harvesting is postponed as long as the season will permit. The roots are then pulled up, and laid on the ground, the tops of the two rows towards each other. The pullers are followed by a man or boy with a bill-hook, who, with a light blow, cuts the tops as fast as three or four can pull. Three men will in this way harvest, of a good crop, 300 bushels in a day. The tops are gathered into heaps and taken to the yard in carts, daily, for the stock until they are consumed. An acre will give from five to ten cart loads of tops. The roots are piled in the field if dry,—the pits, two or two and a half feet broad, covered with straw and earth, and as cold weather approaches, with manure, to prevent frost. N. B.—With a crowbar make one or more holes on the crown of the pit, which must be left open, to let off the rarefied air and prevent the roots from heating.

'Use.—The tops serve for autumn. As soon as the mild weather of spring will justify, I break through the frost, and take the contents of a pit to my barn, and cover the roots with straw or hay. From thence they are fed to my stock, being first chopped up with a *snik*, (Dutch meat-chopper,) or spade. They are excellent for sheep, especially for ewes that have young, and hogs and horses eat them freely. Steamed, they are used in the north of England for horses as a substitute for grain. I have fattened sheep and bullocks upon them with profit. They constitute, particularly from February to June, an excellent culinary vegetable for the table. A bullock will thrive fast upon two bushels a day, and will consume hardly any hay, and requires no drink.

'Produce and Cost.—My average crop has been 600 bushels per acre, though others have raised much heavier products. The cost, in manure and labor, when they are secured for winter, has been from two to three cents per bushel.

'N. B.—Cattle or sheep, fattened upon this root, should be kept from eating them for eight or ten days before they are slaughtered, otherwise the meat will have an unpleasant savor.'

J. B.

Dr. McKinney's Tour in South Florida.
[For the Quarterly Journal of Agriculture, Mechanics, and Manufactures.]

MR. EDITOR.—I was in South Florida part of the months of February and March. The climate is mild as that of the tropics,

and the growth of timber and plants very much the same as that in the West Indies. The soil may be divided into the following varieties: 1st, The mangrove and marsh lands. These are alluvions from the rivers, of a deep black mould, and are inundated in the rainy season. It will not, however, be difficult to reclaim them, as a dyke two feet high will be sufficient, and when once made will be easily kept in repair, the banks being permanent, the currents gentle, and the rise of water inconsiderable. The mangrove lands are covered with a thick growth of the mangrove bush, and the marsh lands with a luxuriant crop of tall coarse grass. These lands might be profitably cultivated in sugar, sea island cotton, and rice, and some think that the coffee and chocolate plants may succeed equally well.

2d, The hammock lands. These are covered with a thick growth of timber, among which the live oak, mastic wild fig, and gum tree, are most conspicuous. The greater part of the timber is valuable in ship-building. The lands are rocky; the soil a light vegetable, mixed with white sand, sea shells, and other marine exuviae. They are the principal lands yet cultivated, and produce corn, potatoes, turnips, with other culinary vegetables. Several plants of tropical origin are also cultivated, such as the plantain, banana, pine apple, papaya, and a few others: these produce good crops, and ripen perfectly well, although they are among the most delicate of tropical plants. Limes of an excellent quality grow at the mouth of the Miami river. Corn grows the whole year. I saw it ripe, in silk, and sprouting from the ground, in the month of February.

3d, The pine barrens. These occupy the greater part of the arable lands, and afford but a dull prospect for successful cultivation. They are very rocky, and the soil a white sand; the timber is of a stunted growth, but good for ship-building, and it is said by residents that these lands produce better than their appearance would indicate. At present, they afford subsistence to the greater part of the population of Cape Florida, and are even a source of gain to some. The *compti*, or Florida sago plant, grows in great abundance throughout these barrens; the root of which, properly ground and macerated, produces a nutritious and wholesome food; and when carefully prepared, is equal to the best Indian arrowroot, as a substitute for which it now finds a ready market in some of our commercial cities. It is prepared at present by a very rude process, and yields 25 per cent., and would doubtless give more if the method of preparing were neater.

The rivers, although navigable, are short in their course. The Miami is but six miles long, and is navigable for steamboats 4 miles. New river is about fifteen miles long, and is navigable nearly the whole distance. They all terminate in the "great everglade," which is the common source of all the rivers and brooks found in South Florida. This immense marsh includes perhaps four-fifths of all the lands south of 28 degrees. It is covered with coarse tall grass, contains lakes and rivers in its bosom, and beautiful islands of timber are seen to speckle its otherwise unvariegated surface. The soil of these islands is said to be fertile. During the rainy season, boats and canoes navigate this immense morass, and game, fish, and fowl, amply pay the huntsman his labor.

The borders of the everglade are higher

than the surrounding lands, hence the water descends with great velocity at the heads of the rivers, affording good sites for water-power machinery; and perhaps, by cutting a canal through this barrier, much good land might be drained in the everglade, and the navigation of the rivers improved. I have seen but few springs; but the river water is pleasant and wholesome, and generally preferred by the inhabitants. Well water is also procured by digging but a few feet.

The Cape Florida settlement is considered very healthy, fevers and catarrhal affections being scarcely known; and, doubtless, if people were well fed and lodged, disease would be less common than at present.

The public is apprized that Dr. Perrine, United States Consul at Campeche, proposed establishing a "tropical plant" nursery at Cape Florida, for the domestication of all tropical exotics useful in the arts, or curious in science. With this object, Dr. Perrine presented a memorial to Congress, on behalf of himself and associates, praying the grant of a tract of land, to be located in South Florida, and to be devoted exclusively to the cultivation of tropical exotics. At the same time, the legislative council of Florida granted an act of incorporation to Dr. Perrine and his associates, as the Florida Tropical Plant Association. Dr. P.'s memorial was referred to a committee which reported favorably thereon, and the report was adopted by the Senate. But owing to the great absorbing question relative to South Carolina, Dr. P.'s memorial met the same fate of all other local questions; and it is probable it will meet the same neglect this session as before, owing to the great excitement now existing in both houses of Congress. Notwithstanding the failure of his project before the councils of the nation, Dr. P. continues to persevere in his favorite plan. He is now establishing, "unaided and alone," a nursery of tropical plants at Cape Florida, and has transplanted thither many exotics before unknown in this country. He has devoted for several years the most assiduous attention to the history and mode of cultivation of the many fibrous plants cultivated in tropical latitudes, with the view of transplanting them to his native country.

It is thought by some that South Florida will not suit the growth of tropical vegetation; but facts prove it will. Frosts are unknown. The most delicate vegetables grow equally in winter as in summer, and many plants indigenous to the tropics are also indigenous to Cape Florida, among these are several species of agave, (henequen, or Sisal hemp,) and cactus, which I have never seen except in hot climates. But from the impossibility of acquiring lands with secure titles, some time must elapse before Dr. Perrine will be enabled to prosecute with effect his experiments. Lands of government are as yet unsurveyed, and Spanish claims have not been entirely confirmed, so as to leave no doubt of their titles. Would it not be advisable that Congress, at as early an hour as practicable, should bring these lands into market, thereby opening a new source of pecuniary and scientific enterprize to our countrymen?

Princeton, 14th June, 1834.

REMARKS.—We learn from a correspondent of the Farmers' Register, that in Middle Florida, "marl is not rare, the whole country being based on a shell rock."

GOLD COINS.—We republish from "Bicknell's Counterfeit Detector," a table of the value of Gold coins, calculated on the basis of the laws lately passed by Congress.

It is however, proper to say, that these tables do not agree with other calculations we have seen—particularly, as to the value of the Sovereign, which Mr. Bicknell's table rates, it is thought too low.—[American.]

GOLD COINS.			
PREPARED EXPRESSLY FOR "BICKNELL'S REPORTER."			
NAMES OF COINS.	Weight	Present standard	Stand. of July 31, 1834.
	dwt. gr.	d. c. m.	d. c. m.
UNITED STATES.			
Eagle, coined before July 31, 1834.	11 6	10	10 66 5
FOREIGN GOLD.			
AUSTRIAN DOMINIONS.			
Sovereign.	3 14	3 17 6	3 37 7
Double Ducat.	4 12	4 29 9	4 58 9
Hungarian, do.	2 53	2 15 4	2 29 6
BAVARIA.			
Carolus.	6 54	6 64 6	6 95 7
Max d'or, or Maximilian.	4 4	3 11 1	3 31 8
Ducat.	2 53	2 13 3	2 27 5
BERNE.			
Ducat, double in proportion.	1 23	1 85 4	1 98 6
Pistole.	4 21	4 26 2	4 54 2
BRAZIL.			
Johannes, 1/2 in proportion.	18	16	17 06 4
Dobraon.	34 12	30 66 6	32 70 6
Dobra.	18 6	16 22 2	17 30 1
Moldore, 1/2 in proportion.	6 22	6 14 9	6 55 7
Crusade.	16 1/2	59 8	63 5
BRUNSWICK.			
Pistole, double in proportion.	4 21 1/2	4 27 1	4 54 8
Ducat.	2 53	2 09 2	2 23
COLOGNE.			
Ducat.	2 53	2 12 5	2 26 7
COLOMBIA.			
Doublons.	17 9	14 56	15 53 5
DENMARK.			
Ducat, Current.	2	1 70 5	1 81 2
Ducat, Specie.	2 53	2 12 5	2 26 7
Christian d'or.	4 7	3 77	4 02 1
EAST INDIA.			
Rupie, Bombay, 1818.	11	6 65 4	7 09 6
Rupie of Madras, 1818.	7 12	6 06 7	7 11
Pagoda, Star.	2 43	1 63 9	1 79 8
ENGLAND.			
Guinea, half in proportion.	5 84	4 79 9	5 07 5
Sovereign, do.	5 1/2	4 57	4 84 6
Seven Shilling Piece.	1 19	1 60	1 69 8
FRANCE.			
Double Louis, coined before 1786.	10 11	9 08 7	9 60 7
Louis, do.	5 5 1/2	4 54 1	4 84 6
Double Louis, coined since 1786.	9 20	8 59	9 15 3
Louis, do.	4 22	4 29 5	4 57 6
Double Napoleon, or 40 francs.	8 7	7 23 2	7 70 2
Napoleon, or 20 do.	4 3 1/2	3 61 6	3 85 1
Same as the new Louis.	5	4 36 2	4 65 5
FRANKFORT ON THE MAIN.			
Ducat.	2 53	2 13 7	2 27 9
GENEVA.			
Pistole, old.	4 7 1/2	3 73 7	3 98 5
Pistole, new.	3 15 1/2	3 23 2	3 44 4
HAMBURG.			
Ducat, double in proportion.	2 53	2 13 7	2 27 9
GENOA.			
Sequin.	2 53	2 15 8	2 30 2
HANOVER.			
Double George d'or, single in proportion.	8 13	7 48 2	7 87 9
Ducat.	2 53	2 15 4	2 29 6
Gold Florin, double in proportion.	2 2	1 57 6	1 67
HOLLAND.			
Double Ryder.	12 21	11 44 2	12 20 5
Ryder.	6 9	5 66 5	6 04 3
Ducat.	2 53	2 13 3	2 27 5
Ten Guilder Piece, 5 do. proportion.	4 8	3 78	4 03 4
MALTA.			
Double Louis.	10 16	8 69 9	9 27 8
Louis.	5 8	4 36 4	4 65 2
Demt Louis.	2 16	2 20 2	2 33 6
MEXICO.			
Doublons, shares in proportion.	17 9	14 56	15 53 5
MILAN.			
Sequin.	2 53 1/2	2 15 6	2 29
Doppia or Pistole.	4 1 1/2	3 57 2	3 80 7
Forty Livre Pieces, 1808.	8 8	7 26 1	7 74 9
NAPLES.			
Six Ducat Piece, 1783.	5 16	4 92 5	5 24 9
Two do or sequin, 1763.	1 20 1/2	1 51 1	1 59 1
Three do or Onetta, 1818.	2 10 1/2	2 34 7	2 49
NETHERLANDS.			
Gold Lion, or Fourteen Florin Piece.	5 7 1/2	4 73 1	5 04 6
Ten Florin Piece, 1720.	4 7 1/2	3 76 6	4 01 9
PARMA.			
Quadruple Pistole, double in proportion.	18 9	15 59 6	16 62 8
Pistole or Doppia, 1787.	4 14	3 93 5	4 19 4
do. 1786.	4 14	3 87 5	4 13 5
Maria Theresa, 1818.	4 3 1/2	3 62 4	3 86 1
PIEDMONT.			
Pistole, coined since 1785.	5 20	5 07 5	5 41 1
Sequin, half in proportion.	2 5	2 13 7	2 28
Carlino, coined since 1785.	29 6	25 63 2	27 34

NAMES OF COINS.	Weight	Present standard	Stand. of July 31, 1834.
	dwt. gr.	d. c. m.	d. c. m.
POLAND.			
Piece of 90 Francs, called Marengo.	4 3 1/2	8 34 1	3 56 4
PORTUGAL.			
Ducat.	2 53	2 13 7	2 27 5
Dobraon.	34 12	30 66 6	32 70 6
Dobra.	18 6	16 22 2	17 30 1
Johannes.	18	16	17 06 4
Moldore, half in proportion.	6 22	6 14 9	6 55 7
Piece of 16 Testoons, or 1600 Rees.	2	1 99 2	2 12 1
Old Crusado of 400 Rees.	15	54 9	58 8
New do. 480 do.	16 1/2	59 8	63 5
Milree, coined in 1735.	19 1/2	73 2	78
PRUSSIA.			
Ducat, 1748.	2 53	2 13 7	2 27 9
do. 1787.	2 53	2 12 5	2 28 7
Frederick, double, 1769.	8 14	7 47 5	7 97 5
do. do. 1800.	8 14	7 45 4	7 95 1
do. single, 1778.	4 7	3 74 9	3 99 7
do. do. 1800.	4 7	3 72 5	3 97 5
ROME.			
Sequin, coined since 1760.	2 4 1/2	2 10 9	2 25 1
Scudo of Republic.	17 0 1/2	14 82 8	15 81 1
RUSSIA.			
Ducat, 1796.	2 6	2 15	2 29 7
do. 1763.	2 53	2 12 5	2 26 7
Gold Ruble, 1756.	1 0 1/2	90 9	96 7
do. 1799.	18 1/2	69 1	73 7
do. Polten, 1777.	9	33 1	35 3
Imperial, 1801.	7 17 1/2	7 34 9	7 82 9
Half do. 1801.	3 20 1/2	3 67 3	3 91 8
do. do. 1818.	4 3 1/2	3 62 9	3 93 3
SARDINIA.			
Carlino, half in pro.	10 7 1/2	8 88 1	9 47 2
SAXONY.			
Ducat, 1784.	2 53	2 12 5	2 26 7
do. 1797.	2 53	2 13 7	2 27 9
Augustus, 1754.	4 0 1/2	3 68 5	3 92 8
do. 1784.	4 0 1/2	3 72 5	3 97 4
SICILY.			
Ounce, 1751.	2 90 1/2	2 35 1	2 50 4
Double do. 1758.	5 17	4 72 7	5 01 4
SPAIN.			
Doublons, 1772, double and single and shares in proportion.	17 8 1/2	15 03	16 02 8
Doublon.	17 9	14 56	15 53 5
Pistole.	4 8 1/2	3 64	3 88 4
Coronilla, Gold Dollar, or Vintern, 1801.	1 3	92 1	98 3
SWEDEN.			
Ducat.	2 5	2 09 7	2 28 5
SWITZERLAND.			
Pistole of Helvetic Republic, 1800.	4 21 1/2	4 27 9	4 56
TREVES.			
Ducat.	2 53	2 2 5	2 26 7
TURKEY.			
Sequin fondue, of Constantinople, 1773.	2 53	1 74 9	1 86 8
do. 1789.	2 53	1 73 3	1 84 8
Half Miesier, 1818.	18 1/2	49 1	52 1
Sequin Fondue, 1818.	2 5	1 71 7	1 83
Yermecbeklek, 1818.	3 1 1/2	2 84	3 02 8
TUSCANY.			
Zechino, or Sequin.	2 53	2 16 6	2 31 8
Ruspone of the Kingdom of Etruria.	6 17 1/2	6 50 5	6 92 8
VENICE.			
Zechino, or Sequin, shares in proportion.	2 6	2 16 6	2 31
WIRTEMBERG.			
Carolus.	6 3 1/2	4 54 4	4 89 8
Ducat.	2 5	2 69 7	2 23 5
ZURICH.			
Ducat, double and half in proportion.	2 53	2 12 5	2 26 7

An Act supplementary to an act to amend the several acts respecting copyrights.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all deeds or instruments in writing for the transfer or assignment of copyrights, being proved or acknowledged in such manner as deeds for the conveyance of land are required by law to be proved or acknowledged in the same State or district, shall and may be recorded in the office where the original copyright is deposited and recorded; and every such deed or instrument that shall at any time hereafter, be made and executed, and which shall not be proved or acknowledged and recorded as aforesaid, within sixty days after its execution, shall be judged fraudulent and void against any subsequent purchaser or mortgagee for valuable consideration without notice.

Sec. 2. And be it further enacted, That the clerk of the District court shall be entitled to such fees for performing the services herein authorized and required, as he is entitled to for performing like services under existing laws of the United States.

Approved, 30th June, 1834.

LATEST FROM HAVANA AND MEXICO.—Our papers from Havana to the 5th July, contain a proclamation of General Santa Anna, dated Mexico, May 21, exploring the evils that exist throughout the country, and convening the legislature of the general government on the 24th, the day following, that they may adopt what in their wisdom shall seem fit. There is nothing else interesting.

[From the Army and Navy Chronicle.]

THE REGIMENT OF DRAGOONS is now completed to its establishment, and all the companies have marched to Fort Gibson, where the head quarters have been established during the winter. This regiment is composed of ten companies, of about seventy men each; each man is armed with a sword, pistol, and carbine. The carbine is of a peculiar description; it is on the principle of Hull's rifles, loads it is on the breech, and the part containing the charge is so constructed as to separate from the barrel by means of a spring. This part may be called the chamber; and is about six inches long; when loaded, it is easily returned to its position, and then, if the percussion cap is put on the touch-hole, the piece is ready for firing; it requires no ramrod, yet it is furnished with one, which answers the purpose of wiper, and, when drawn out, makes a bayonet equal in length to the barrel of the piece, and is a very formidable weapon. The whole piece weighs seven pounds and a half, and carries balls twenty-four to the pound.

The Dragoons are instructed to serve on horse or foot, as occasion may require. About this time, it is expected that they are on the expedition among the tribes of Indians inhabiting the country between the Rocky Mountains and the Mississippi. They are to proceed across the country to the *baggy* of the Red River, thence westwardly towards the Mexican frontier, thence northward as far as it may be prudent to go, allowing time to return before the cold weather sets in. On its return, the regiment will descend by the Missouri on either bank.

Four companies will winter at Fort Leavenworth, viz: Wharton's, Hunter's, Ford's, and Duncan's.

Three companies, Sumner's, Boon's and Browne's, on the right bank of the Mississippi, within the Indian country, near the mouth of the Des Moines. The other three companies, Trenor's, Bean's and Perkin's at or near Fort Gibson.

The expedition, it is understood, will be accompanied by several gentlemen of science, who go at their own expense. The object of the expedition is to give the wild Indians some idea of our power, and to endeavor, under such an imposing force, to enter into conferences with them, to warn those Indians who have been in the habit of robbing and murdering our people who trade among them, of the dangers to which they will be exposed in case they continue their depredations and massacres.

Several delegations of the newly emigrated Indians, now settled beyond the limits of the States and Territories, to the westward of the Mississippi, as well as of the Osages and other tribes near them, will accompany the expedition, in the hope of making treaties of friendship with the wild tribes, and thus prevent, for the future, the recurrence of those wars which are so common among the Indians.

The expedition, it is hoped, will result in much good; it will afford protection to the civilized Indians, to our frontiers, to our trade with the natives, and cover the Santa Fe caravans trading with Mexico; and, perhaps, enlighten the Indians generally as to the humane policy of the United States towards them, and also as their own true interests.

[From the Albany Evening Journal.]

DEATH OF CITIZEN GENET.—Edmund C. Genet, Esq. died at his residence in Schodack, Rensselaer County, this afternoon, after an illness of two days. Mr. Genet came to this Country as Minister of the French Republic, soon after the Revolution, and when superceded, took up his permanent residence among us as a private citizen.

[From the Journal of Commerce.]

NEW FERRY TO BROOKLYN.—A special Committee of the Board of Assistants to whom this subject was referred, have reported in favor of establishing a new Ferry from Whitehall Slip in New York, to the foot of Atlantic street, Brooklyn, and selling the lease of the same for ten years to the highest bidder at public Auction. The subject is to be made the special order of the day for the next meeting.

Harvard University.—The usual Valedictory Oration and Poem was to be delivered before the graduating class on Tuesday last in the University Chapel. The Oration by J. H. Williams, of Maine, and the Poem by Royall Tyler, of Boston.

NEW-YORK AMERICAN.

JULY 12—19, 1834.

LITERARY NOTICES.

THE LIFE OF ALEXANDER HAMILTON, by his son, JOHN C. HAMILTON; vol. 1st; N. York, HALSTED & VOORHIES.—The men of the Revolution were worthy to co-operate in the great cause which their virtues, talents and disinterestedness rendered triumphant; and it is, therefore, always with renewed satisfaction that we receive accurate biographical notices of them. The few years past have contributed largely to our stock of such biographies. Austin's life of *Elbridge Gerry*, Sparks's life of *Gouverneur Morris*, the life of *John Jay* by his son, and that of *Gov. Livingston* of New Jersey, by Theo. Sedgwick, jr., have revealed to grateful posterity—for already we are posterity to the heroic race of the Revolution, of whom so few yet linger on the stage—the many claims of those Fathers of our country to the admiration and gratitude of the millions for whom, and for their descendants, they established Freedom under the shield of written constitutions. To these, comes now to be added the first volume of the life of *Alexander Hamilton*, so long expected, so often undertaken, so difficult to write with impartiality, so full of interest if thus written. When we say, that with the exception to be hereafter noted, we think the volume before us fulfils these conditions, we pronounce upon it the highest eulogy. It must be added, however, that the most difficult part of the biographer's task yet remains to be executed, as the narrative thus far terminates with the retirement of Col. Hamilton from active military service, after the brilliant achievement, in which he bore so conspicuous a part, at Yorktown.

Hamilton was born in the small island of *Nevis*, in the West Indies, and when quite a lad was placed in the counting house of N. Cruger, Esq., a distinguished merchant of *Santa Cruz*. It was while in this situation, and when not thirteen years old, that he wrote the following letter to a school companion. We think it so remarkable for the high aspirations, and well founded reliance in his capacity for greater things, which were realized in after life, as well as for the force of some of its thoughts and expressions, that we are sure our readers will gladly see it:

St. Croix, Nov. 11, 1769.

DEAR EDWARD: This serves to acknowledge the receipt of yours per Captain Lowndes, which was delivered me yesterday. The truth of Capt. Lightbown and Lowndes' information is now verified by the presence of your father and sister, for whose safe arrival I pray, and that they may convey that satisfaction to your soul, that must naturally flow from the sight of absent friends in health; and shall for newa this way, refer you to them.

As to what you say, respecting your soon having the happiness of seeing us all, I wish for an accomplishment of your hopes, provided they are concomitant with your welfare, otherwise not; though doubt whether I shall be present or not; for to confess my weakness, Ned, my ambition is prevalent, so that I condemn the grovelling condition of a clerk, or the like, to which my fortune condemns me, and would willingly risk my life, though not my character, to exalt my station. I am confident, Ned, that my youth excludes me from any hopes of immediate preferment, nor do I desire it; but I mean to prepare the way for futurity. I'm no philosopher, you see, and may be justly said to build castles in the air; my folly makes me ashamed, and beg you'll conceal it; yet, Neddy, we have seen such schemes successful, when the projector is constant. I shall conclude by saying, I wish there was a war. I am, dear Edward, yours, ALEX. HAMILTON.

P. S. I this moment received yours by William Smith, and pleased to see you give such close application to study.

Addressed to "Edward Stevens, in New York."

It should be remembered to the credit of the influence of a commercial education, to expand while it methodizes the mind, that frequently, in after life, Hamilton referred to the time passed by him in the

counting house, as most profitably spent. He was after a time removed to New York, for the benefit of better instruction than the West Indies could afford; and after passing some time at a school in Elizabethtown, kept by Mr. Barber,—who afterwards, as Col. Barber, greatly distinguished himself in the revolutionary war—he was placed at King's, now Columbia, College. The diligence with which he improved the opportunities now afforded him of acquiring knowledge was remarkable; and as the questions between the mother country and the colonies now began to assume the most threatening aspect, a mind so energetic and active, and a temper so ardent as Hamilton's, could not refrain from taking part in them; and in July, 1774, on occasion of what was long remembered as the "great meeting in the fields," convened to denounce the Boston port bill, and to recommend the choice of delegates throughout the State to a Continental Congress, he, then only 18 years of age, addressed the meeting in a strain of fervor, eloquence and argument, that called forth the loudest applause. From this time, he became a writer in favor of the rebel cause, and still a collegian, was, as a pamphleteer, frequently the antagonist of the President of the College, Dr. Cooper, and others of the clergy of the Established Church, who zealously espoused the cause of the mother country. The extracts given from some of these political writings of Hamilton, evince a degree of reflection, knowledge, and foresight, that, in a youth of his age, are probably not to be paralleled.

We shall be excused, by New Yorkers at least—though they have not yet done justice to the character of one of their noblest fellow citizens, General Schuyler—if we here interrupt the narrative of Hamilton's life, to introduce a rapid but glowing sketch, drawn by the author, of that distinguished individual, at the commencement of the revolution.

Colonel Schuyler, had been a partizan officer in the war of seventeen hundred and fifty-six. By his fertility of resource and unyielding energy, he rendered distinguished services to the British commander, [Lord Howe] who fell, lamented, by his side, and to him the honor of his interment was confided. Descended from one of the early Dutch settlers of this province, the influence and respectability of whose family had been transmitted through successive generations, he exercised an almost unrivalled sway over the minds of the descendants of a people, whose first mention in history, as a distinct political community, is associated with the assertion of their liberties.

Possessed of great wealth, he embarked it in the contest, as a pledge of his patriotism, and, in the course of the revolution, sacrificed as much of fortune and of feeling, as any other individual in America.

Party to the most secret councils of the continent, he had staked every thing on the issue of the conflict, and had acquired a weight of influence which led both Virginia and Massachusetts to regard him as the connecting link in the great purposes at which they aimed. "On the shoulders of this great man," said Judge Benson, "the conduct of New-York rested."

His love of fame was less than his love of country; and when the misadventures of some robbed him of the glory to which he was entitled, and while artifice withheld from him an opportunity of vindication, he is not seen indulging in invidious comments on the successes of others, but continuing within the sphere of great influence and resources, to advance the cause of his early preference. Thus, his strength of character sustained him when other men sink, and his adversity gave him more true honor than he could have derived from success.* Sullied by no private vices, and misled by no small passions, his path through life was high, unspotted, equal; and he died with a reputation, which those who knew and followed him, have contended to perpetuate.

When it was decided that the sword was to be the arbiter of the difficulties between the mother country

* "I hope," said Mr. Jay, "you will seriously determine to serve your country, at least in a legislative capacity. Class yourself with those great men of antiquity, who, unmoved by the ingratitude of their country, omitted no opportunities of promoting the public weal."—12th February, 1778.

and the colonies, Hamilton, whose predilection was for arms, sought and obtained, though under 20 years of age, the command of the only artillery company raised by the State; and with this company he went through the disastrous campaign of 1776, from the battle on Long Island to the final establishment of the troops under General Washington, in winter quarters, at Morristown. In the ensuing March he accepted, though with great violence to his military ambition, which panted for opportunities of distinction from an active command in the field, the station of aid-de-camp to General Washington, and so continued until February, 1781; when, from some trifling misunderstanding between them, Hamilton instantly relinquished his station, and would listen to no proposition to return, though no abatement occurred in the mutual esteem and friendship of the parties. While in the family of the Commander-in-Chief, he appears to have enjoyed his highest confidence, which was never more signally manifested, nor justified, than by the mission, and the manner in which it was executed, of young Hamilton to Gates. After the surrender of Burgoyne, Washington required, from the northern army, a detachment of all the disposable force, in order that he might, while the water defences of the Delaware were yet complete and in his possession, reduce Howe, then in Philadelphia with his army, and cut him off from all communication with the fleet, in the same way that Burgoyne was reduced. Gates, puffed up with the victory at Saratoga, prepared to his hand by Schuyler—who was superseded at the moment when he was about to reap the benefit of all his toils, skill and sacrifices—lent a reluctant ear to the demands of Washington; and the address, decision and judgment with which the young aid-de-camp managed and controlled the weak but victorious, and then popular General, are well set forth in the Sixth Chapter of the volume, as, in the subsequent chapter, are the intrigues in Congress and the army, to supersede Washington, and place first Lee, then Gates, and even Conway, in the chief command.

We said at the outset of these remarks, that with a single exception, we thought the biographer had manifested impartiality. That exception consists in the claim for Hamilton, of having written, in the name of Washington, almost every important paper transmitted during his connection with the General as aid-de-camp. It may be that this is so, but the evidence of it is not given to the public. Sometimes, indeed, it is said that the original drafts, in the hand writing of Hamilton, remain; but more frequently it is simply stated, that he addressed in the name of Washington such a letter, or such a remonstrance, or such an order: at other times, when this is not directly asserted, it is left open to implication, as, for instance, after publishing the correspondence between Washington and Gates, respecting Conway's secret denunciations, entertained and encouraged by Gates, of Washington's abilities as a soldier, it is said at page 143, "This correspondence, written on the part of Washington with a master's hand," &c. The expression we have italicised would seem to imply that Washington was not the writer; while, from the manner in which Colonel Hamilton's name had been mixed up in the controversy, the credit of the "master's hand" could not with propriety be directly claimed for him.

It is by no means intended to maintain that Hamilton was not very frequently the writer of General Washington's despatches and addresses; but the homogeneity of all these productions, both while Hamilton was a member of his family and afterwards, proves, that one mind stamped the character upon all, and that, in fact, though others might arrange and record the ideas and arguments to be used on any given occasion, Washington himself furnished the substance of those ideas and arguments.

Upon the whole, we have laid down this volume

with impressions raised—high as they were before—of the great and varied abilities of Gen. Hamilton, and with much new information and proportionate admiration, of the chivalrous and daring military spirit which he evinced during the war, and which he earnestly sought every opportunity of indulging at any personal hazard; as, for instance, at the battle of Monmouth Court House, where victory was so treacherously thrown away by Lee. The letters and financial plans, submitted at first anonymously, and afterwards directly, by Hamilton to Robert Morris, are among the most remarkable papers ever published, as showing the deep reflection, and sound views—sound much beyond the period in which they were formed—which, amid the din of arms and the incessant duties of his military station, he had been enabled to mature, on subjects so foreign to his then pursuits, and always so liable to error.

It would seem needless to add, that we shall look with impatient interest for the continuation of this biography.

CHEMISTRY, METEOROLOGY, AND THE FUNCTIONS OF DIGESTION, CONSIDERED WITH REFERENCE TO NATURAL THEOLOGY: BY WM. PROUT, M. D., F. R. S. 1 vol. Philadelphia: Carey, Lea & Blanchard.—There is no one of the four Bridgewater treatises which have preceded this one, that more clearly proves than it, the error of having arbitrarily divided the topics connected with the object specified in the will of the noble and revered clergyman. The matters of chemistry, meteorology, and the functions of digestion, would not, and do not, occupy more than half the volume, which, in order that it might, we suppose, emulate its predecessors in bulk, had to be spun out by arguments—good enough in themselves, though not expressed with any remarkable precision or elegance—drawn from branches of the subject committed to other hands. There is, undoubtedly, in this volume, much of useful information, and many just views of the power and goodness of God as manifested in the Creation; but as a whole, it does not strike us at all as a superior performance.

We make an extract—not so much in reference to the main design of the work, as to lay before our readers a curious fact connected with the appearance in London of the Epidemic Cholera:

The matters occasionally diffused through the atmosphere, which appear to be in a state of solution, are not often perceptible by our senses, unless in some cases, perhaps, by the sense of smell.

As an instance of the presence of such bodies in the atmosphere we may mention a very remarkable observation which occurred to the writer of this treatise during the late prevalence of epidemic cholera. He had for some years been occupied in investigations regarding the atmosphere; and for more than six weeks previously to the appearance of cholera in London, had almost every day been engaged in endeavoring to determine, with the utmost possible accuracy, the weight of a given quantity of air, under precisely the same circumstances of temperature and of pressure. On a particular day, the 9th of February, 1832, the weight of the air suddenly appeared to rise above the usual standard. As the rise was at the time supposed to be the result of some accidental error, or of some derangement in the apparatus employed; in order to discover its cause, the succeeding observations were made with the most rigid scrutiny. But no error or derangement whatever could be detected. On the days immediately following, the weight of the air still continued above the standard; though not quite so high as on the 9th of February, when the change was first noticed. The air retained its augmented weight during the whole time these experiments were carried on, namely, about six weeks longer. The increase of the weight of the air observed in these experiments was small; but still decided, and real. The method of conducting the experiments was such as not to allow of an error, at least to an amount so great as the additional weight, without the cause of that error having become apparent. There seems, therefore, to be only one mode of rationally explaining this increased weight of the air at London in February, 1832; which is, by admitting the diffusion of some gaseous body through the air of this city, considerably heavier than

the air it displaced. About the 9th of February the wind in London, which had previously been west, veered round to the east, and remained pretty steadily in that quarter till the end of the month. Now, precisely on the change of the wind the first cases of epidemic cholera were reported in London; and from that time the disease continued to spread. That the epidemic cholera was the effect of the peculiar condition of the atmosphere, is more perhaps than can be safely maintained; but reasons, which have been advanced elsewhere, lead the writer of this treatise to believe that the virulent disease, termed cholera, was owing to the same matter that produced the additional weight of the air. The statement of these reasons here would be quite out of place: it is enough to say, that they are principally founded on remarkable changes in certain secretions of the human body, which, during the prevalence of the epidemic were observed to be almost universal; and that analogous changes have been observed in the same secretions of those, who have been much exposed to what has been termed *Malaria*. The foreign body, therefore, that was diffused through the atmosphere of London, in February, 1832, was probably a variety of malaria.

BOYS' AND GIRLS' LIBRARY OF USEFUL AND INTERESTING KNOWLEDGE, Vol. XX.—N. Y., Harper and Brothers.—In this admirable little book, Uncle Philip re-appears, and abandoning, for the present, subjects of Natural History, undertakes to explain to children the truth of the Christian Religion. We have carefully read these "Evidences of Christianity," designed for the comprehension and instruction of childhood; and while we say that no child, of ordinary faculties, can fail to perceive and feel the force and drift of the arguments used, we are quite sure many grown persons, many parents, will, in this volume, find knowledge and conviction where, before, they have rather taken upon trust, than sought to be personally informed and satisfied. The mode of proof adopted in these pages is analogous, in some degree, to that so beautifully and logically exemplified in the *Hore Pauline* of Paley—that is to say, to prove, first, by testimony, extrinsic of the New Testament, the existence of such writings at the time they purport to have been written, and their identity with those we now have; and then, by the simple and inartificial statements of the writings themselves, and the want of caution, or the presumption of fraud, with which details immaterial to the main narrative are constantly given, but which, if false, would furnish so many sure and more ready means of detection—to infer the truth of these writings. In this and other modes, having established—by testimony stronger and more connected, than that upon which we believe, without hesitation, any leading fact in profane history—the authenticity of the Scriptures, they themselves then become, by the doctrines they inculcate, and the miracles performed to shew that those doctrines were of God, additional evidence. This is a very imperfect sketch of the design of this most valuable little treatise; but it may, we hope, serve the purpose of awakening to it the attention of many parents, and, we hope, of Sunday School Teachers, for whose use it is so admirably adapted.

THE LIFE OF THE REV. ROWLAND HILL, by the Rev. EDWIN SYDNEY. 1 vol. New York: D. Appleton & Co.—The career of the Rev. Rowland Hill—prolonged to nearly 90 years, and active almost to the last—is certainly a very remarkable one.—Sprung from a distinguished family, educated for the ministry of the Established Church, and early and deeply impressed with a vital sense of religion, he was as it were driven into *methodism* by a strict adherence on the part of the Church to forms, which, in his judgment, restrained the usefulness and efficiency of a preacher. His biographer, a minister of the Church of England, has given an impartial and interesting view of the labors, talents, and earnest sincerity of this eminent man, which will, we do not doubt, be eminently acceptable to those of his own sect, and is not without attraction for all others.—Among other motives which in this country may give

currency to this biography, it may be mentioned that he was a staunch opposer of the measures which brought on the war of the American revolution, and frequently from his pulpit, in 1776, denounced this war. This gave something of a political character to his bitter dispute with John Wesley, who espoused the cause of the mother country, and proclaimed Hill's language concerning the revolted colonies as "disloyal." We extract from this volume the following letter, both as indicative of that vein of humor which characterized the writer, and sometimes led him indeed in the pulpit to introduce language and imagery little suited to the solemnity of the place, but chiefly as inculcating an admirable lesson to public speakers, in meetings whether religious, charitable or political, to avoid that greatest of all bores "circumlocutioness." The letter was in reply to an invitation to preside at a meeting of the Tract Society.

Wotton, Sept. 20, 1826.

MY DEAR FRIEND:—An old man, in the 83d year of his age, ought to be a little provident of his remaining strength. You will say, no bodily strength can be needed, to sit quietly in a chair at a public meeting. True, but no small degree of mental patience is needed, while the poor chairman must sit it out for three hours at the least, to hear many a tiresome long speech (if they are not all of the same sort) without any remedy or redress, upon the high *fidgets*, above half the time gaping and watching the clock. In most of these public meetings I have been tired down before they have been half over, and have been obliged to sheer off with the remains of patience, and leave the finishing to others, while nothing but a short speech might have been expected from me.

In the way in which too many of these sort of meetings are now conducted, I have many fears, that many a good cause is injured by the means adopted for their support. Though some may be gratified by what may be said to the point, yet O the dullness, the *circumlocutioness*, the conceit, the tautology, &c. &c. of others. In short, few know how to be pithy, short, and sweet. And as I find it very difficult to be pithy and sweet, my refuge at all times is to be short. Pity, therefore, a poor old man, and let him not be sentenced to suffer such a sort of pillory punishment, and try if you cannot persuade some other good tempered sinner to suffer in his stead.—Yours very sincerely and affectionately,

ROWLAND HILL.

Mr. Jones, Religious Tract Society, Paternoster Row, London.

WORKS OF MRS. SHERWOOD; vol. II, uniform edition; New York, Harper & Brothers.—We have heretofore expressed satisfaction with this undertaking of the Harpers; for although we think Mrs. Sherwood sometimes too exacting in her requisitions, and narrow in her views of duty, the general scope and design of her writings are so praiseworthy, and they are carried out with so much talent, as to render them highly attractive. The present volume contains *The Fairchild Family*, *The Orphans of Normandy*, and *The Latter Days*.

THE NUN, by MRS. SHERWOOD. Princeton, M. Baker.—This is a new publication of Mrs. Sherwood, aimed, as may be inferred by the title, at the Catholic religion. It purports to be the story of a novice, who, having taken the white veil, is released by one of the popular tumults arising from the French revolution, before the final dedication of herself by the ceremony of taking the black veil, but not before she had become acquainted with some of the intolerance, bigotry and cruelty, by which the inmates of the convent were subdued. It is certainly a tale of interest; but how far it shadows forth the truth of a convent life, we have no means to judge,—and sooth to say, we so much dislike polemics in every shape, that we care not to inquire.

GUY RIVERS, a Tale of Georgia—by the author of *Marion Faber*—2 vols., Harpers.—There has been no American novel since the days when the appearance of Mr. Cooper's *Spy* created such a sensation in our reading public, that has excited half the interest that will attend the circulation of *Guy Rivers*,

which we do not hesitate to say will at once establish its author's reputation as one of the first novel writers of the day. Its defects may, indeed, be easily set forth, but they are not such as seriously affect the character of the work, and arise only from a want of judgment, betrayed in but a few instances.

The story of Guy Rivers is one of frontier life; the scene being laid upon that debateable ground which existed for so many years on the confines of Georgia and the Cherokee country. The characters are chiefly drawn from that celebrated association of ruffians known as "The Poney Club"—a very cleverly written account of which was communicated in our columns last winter, by a young officer of the army, who had been stationed in the neighborhood of their operating ground. There are also several boldly drawn backwoodsmen, who do not deserve to be classed with this amiable fraternity; and in immediate contrast with the rough nature of both these, in some points, assimilating parties, we have several high-bred Carolinians, and a group of female characters so admirably drawn, that either of them would supply Mr. Cooper with capital enough, in the way of womanly traits, to redeem half his heroines. In this general enumeration of the dramatis personæ, we have particularly avoided giving any insight into their characters individually, though there are several of them which would bear a very minute dissection. If there be one defect in their drawing, it is in giving too much of a metaphysical turn to all the important ones; a coloring unnatural itself, when thus broadly laid on, and impairing the effect produced by the prominent personage, in assimilating others to himself in a striking characteristic. Indeed, we are inclined to think that the author has injured his work, by keeping the excellent moral which he had proposed to himself, too much in the foreground by these lengthened discussions, which certainly at times sound oddly in the mouths of the wild characters so well delineated in other passages, and in no slight degree destroy the keeping of the animated scenes into which they are not always skilfully introduced. They give an insight into the mind of the author, rather than into the soul of his characters, and while adding to our respect for his resources, diminish our admiration of his judgement and his skill. But these blemishes, where they do exist, are attributable only to want of tact, and never to want of Power, for our author, though sometimes tedious, is never dull. His tediousness does not arise from insipidity in himself, but from the eagerness of the reader to break through every thing that any way retards the thread of his thrilling story. If we had any other of these frivolous objections to make against the details of a production so richly entitled to praise as a whole, it would be by hinting at a degree of bad taste manifested in dwelling so much upon certain qualities of every gentleman which our author, by the way he speaks of them, seems to think peculiar to the Southron, and characteristic of the Carolinian above all others. "The chivalry of the South," is a cry so dinged into one from his earliest years, by all who draw breath below Mason & Dixon's line, that one really becomes sick of it, and whatever may be our predilection for those traits of Southron character which, among school boys, in colleges, at watering places, or at home, do decidedly make it personally the most popular in the Union, we cannot, in spite of a thousand agreeable associations with it under all these circumstances, but feel a sort of disgust at this wholesale appropriation of praise under all circumstances and in all places. At political meetings of mixed people at home it might indeed be expected; but we have it every where—on the floor of Congress—in general society—in grave public documents—and, as in the present instance, in light and elegant literature.

A man with the philosophical turn of mind possessed by our author, must know that variety of character is seldom found upon the surface in the more elevated regions of society—that a gentleman is a gentleman, all the world over—and that certain requisites which go to make up his character, can be no where dispensed with; above all, he knows that good breeding and exclusiveness are incompatible with each other; for the implied benevolence which is the soul of good-manners, embraces every one within the sphere of its influence. The term *aristocratic*, which he uses so frequently in speaking of deportment, we object to decidedly, if meant to imply more than the mere physical appearance—the blooded look of an individual. *Republicanism* is the very essence of finished manners; and we could quote no less authority than Chesterfield to bear us out in the assertion. For by Republicanism we mean that general consideration that should be extended to the self-love of every one, that embrasive politeness and kindness of demeanor that comprehends the humblest within its winning circle—that is practised toward all from an inward feeling of refined humanity, and not awarded in certain measures to each as they may establish their proportionate claim to consideration. To such a tone of breeding, elevated without hauteur, and refined without being exclusive, we should never, as the word is generally received, apply the term *aristocratic*. Such a tone of breeding constitutes even more than his eloquence and his wit, the magic of manner that witches every one who has ever exchanged five words with Henry Clay. The Kentuckians, indeed generally, and the western Virginians, have more of it, especially in the half educated classes, than we ever witness here; and, if manners are to be the criterion of sectional superiority, it is among the mass of the people, and not the highly educated few, that we should look. But to break short this travelling digression, we must not, after thus adding one more to the trivial faults discoverable in Guy Rivers, take leave of our author, without giving him heartfelt thanks for the entertainment we have received from his masterly production. We took occasion in our notice of Martin Faber, to pay a slight tribute to his literary powers, and express the wish that they would soon be exercised upon a work better conceived in itself, and that would afford broader scope for his talents. That wish has been amply gratified in the production before us, which, apart from the higher intellectual power manifested in it, would be sufficient only as a vivid picture of manners, to establish a most enviable reputation for its author.

After marking a number of fine passages and striking scenes for quotation, our limits allow us only room for the following:

The Assassination.—They reached the point proposed in due season; their victim had not yet made his appearance, and they had sufficient time for all their arrangements. The place was one well calculated for the successful accomplishment of a deed of darkness. The road at the foot of the hill narrowed into a path scarcely wide enough for the passage of a single horseman. The shrubbery and copse on either side overhung it; and in many places were so thickly interwoven, that when, as at intervals of the night, the moon shone out among the thick and broken clouds, which hung upon and mostly obscured her course, her scattered rays scarcely penetrated the dense enclosure. At length the horseman approached and in silence. Descending the hill, his motion was slow and tedious—he entered the fatal avenue, and, when in the midst of it, Rivers started from the side of his comrade, and advancing under the shelter of a tree, awaited his progress. He came—no word was spoken—a single stroke was given, and the horseman, throwing up his hands, grasped the limb which projected over, while his horse passed from under him. He held on for a moment to the branch, while a groan of deepest agony, mental as well as physical, broke from his lips, when he fell supine to the ground. At that moment, the moon shone forth unimpeded and unobscured by a single

cloud. The person of the wounded man was fully apparent to the sight. He struggled, but spoke not; and the hand of Rivers was again uplifted, when Munro rushed forward.

"Stay—away, Guy—we are mistaken—this is not our man."

The victim heard the words, and, with something like an effort at a laugh, though seemingly in great pain, exclaimed—

"Ah, Munro, is that you?—I am so glad;—but I'm afraid you come too late. This is a sad jest!"

It was Forrester who spoke, and Munro would have saved him; but Rivers, who had done himself no injustice in the narrative which we have already heard, rejected the more merciful suggestion. The wounded man saw his action and heard the controversy, and the few words he was enabled to utter were those of prayer and entreaty.

"Save, me Wat—he will strike again—I have done you no harm—I will do you none—and—would live, Wat—would live—happy—Kate."

He threw his hands with fearful energy as he beheld his murderer—from whom Munro had wrested the weapon originally used—aiming a second blow with the small hatchet which he always wore. The interposition of Munro was without avail; the sharp steel drove through, separating the extended fingers of the fallen man as he threw them up, and crushing and crunching deeply into the skull. The unhappy woodman sank back, without groan or further word, even as an ox beneath the stunning stroke of the butcher.

OUTRE-MER, OR A PILGRIMAGE BEYOND THE SEA; No. 2. Boston: Hilliard Gray & Co.—The classic pen of Professor Longfellow is not less apparent in this continuation of his light and sketchy, but highly polished work, than in the number we had occasion to notice about a year since. The work, as our readers are probably aware, consists of papers chiefly descriptive and humorous, somewhat upon the plan of "The Sketch Book," enriched occasionally by an article like that from which we shall here make some extracts, which indicate a great familiarity on the part of the author with sources of literature but seldom drawn from, and exhibiting a remarkable facility and grace in re-setting their almost forgotten gems, in a dress that brings their buried beauty before us in all the charm of original freshness and brilliancy.

The ingenious writings of Sismondi have made us so familiar with the origin and genius of the Troubadours, that it is unnecessary to copy here the various information embodied in the first part of the article entitled "The Trouveres," though we might, without impertinence, refer many to it for information which would be entirely novel to them. But the happiness with which Mr. Longfellow has succeeded in transfusing the light and sparkling grace, the freedom, and touching simplicity of his originals, into the following rambling translations, will bear us out in choosing this long but attractive quotation as a favorable specimen of the attractions of *Outre-Mer*.

The favorite theme of the ancient lyric poets of the North of France is the wayward passion of love. They all delight to sing *les douces douleurs et le mal plaisant de fine amor*. With such feelings the beauties of the opening Spring are naturally associated. Almost every love ditty of the old poets commences with some such exordium as this: "When the snows of winter have passed away, when the soft and gentle spring returns, and the flower and leaf shoot in the groves, and the little birds warble to their mates in their own sweet language,—then will I sing my lady-love!"

Another favorite introduction to these little rhapsodies of romantic passion, is the approach of morning and its sweet-voiced herald, the lark. The minstrel's song to his lady-love frequently commences with an allusion to the hour,

"When the rose bud opens its eye,
And the blue bells droop and die,
And upon the leaves so green
Sparkling dew-drops lie."

The following is at once the simplest and prettiest piece of this kind which I have met with among the early lyric poets of the North of France. It is taken from an anonymous poem entitled, "The Paradise of Love." A lover having passed the "live-long night in tears, as he was wont," goes forth to

beguile his sorrows with the fragrance and beauty of morning. The carol of the vaulting sky-lark salutes his ear, and to this merry musician he makes his complaint:

He! aloste,
Joliete!
Petit c'est de mes maus.
Hark! hark!
Pretty lark!
Little heedest thou my pain!
But if to these longing arms
Pitying Love would yield the charms
Of the fair
With smiling air,
Blithe would beat my heart again.
Hark! hark!
Pretty lark!
Little heedest thou my pain!
Love may force me still to bear
While he lets consuming care,
But in anguish
Though I languish,
Faithful shall my heart remain.
Hark! hark!
Pretty lark!
Little heedest thou my pain!
Then cease, Love, to torment me so:—
But rather than all thoughts forego
Of the fair
With flaxen hair,
Give me back her frown again.
Hark! hark!
Pretty lark!
Little heedest thou my pain!—

Beside the "woful ballad made to his mistress' eyebrow," the early lyric poet frequently indulged in more calmly analyzing the philosophy of love, or in questioning the object and destination of a sigh. Occasionally these quaint conceits are prettily expressed, and the little song flutters through the page like a butterfly. The following is an example:

Et ou vas tu, petit soupir,
Que j'ai ouï si doucement?
And whither goest thou gentle sigh,
Breathed so softly in my ear?
Say; dost thou bear his fate ere
To Love's poor martyr doomed to die?
Come; tell me quickly,—do not lie,
What secret message bringest thou here?
And whither goest thou, gentle sigh,
Breathed so softly in my ear?
May heaven conduct thee to my will,
And safely speed thee on thy way;
This only I would humbly pray—
Pierce deep—but, oh, forbear to kill.
And whither goest thou, gentle sigh,
Breathed so softly in my ear?

The ancient lyric poets of France are generally spoken of as a class, and their beauties and defects referred to them collectively and not individually. In truth there are few characteristic marks by which any individual author can be singled out and ranked above the rest. The lyric poets of the thirteenth and fourteenth centuries stand upon nearly the same level. But in the fifteenth century there were two, who surpassed all their contemporaries in the beauty and delicacy of their sentiments; and in the sweetness of their diction, and the structure of their verse, stand far in advance of the age in which they lived. These are Charles d'Orléans and Clotilde de Surville.

Charles, Duke of Orleans, the father of Louis the Twelfth, and uncle of Francis the First, was born in 1391. In the general tenor of his life, the peculiar character of his mind, and his talent for poetry, there is a striking resemblance between this noble poet and James the First of Scotland, his contemporary. Both were remarkable for learning and refinement;—both passed a great portion of their lives in sorrow and imprisonment; and both cheered the solitude of their prison walls with the charms of poetry. Charles d'Orléans was taken prisoner at the battle of Agincourt in 1415, and carried into England, where he remained twenty-five years in captivity. It was there, that he composed the greater part of his poetry. In 1440 he returned to France, where he died in 1467.

The poems of this writer exhibit a singular delicacy of thought and sweetness of expression. The following little *Renouveaux*, or songs on the return of Spring, are full of delicacy and beauty.

Le temes a laissé son manteau
De vent, de froidure et de playe.
Now time throws off his cloak again
Of ermin'd frost, and wind and rain,
And clothes him in embroidery
And glittering sun and clear blue sky.
With beast and bird the forest rings,
Each in his jargon cries or sings:
And Time throws off his cloak again
Of ermin'd frost, and wind and rain.
River, and fount, and tinkling brook
Wear in their dainty livery
Drops of silver jewelry;
In new made suit they merry look:
And Time throws off his cloak again
Of ermin'd frost, and wind and rain.

The second upon the same subject presents a still more agreeable picture of the departure of Winter and the sweet return of Spring.

Bien monstrez, printemps gracieux,
De quel mestier savez servir.

Gentle Spring, in sunshine clad,
Well dost thou thy power display!
For Winter maketh the light heart sad,
And thou,—thou makest the sad heart gay.
He sees thee—and calls to his gloomy train,
The sleet, and the snow, and the wind, and the rain,
And they shrink away—and they flee in fear,
When thy merry step draws near.

Winter giveth the fields and the trees so old,
Their leards of icicles and snow;—
And the rains it raineth so fast and cold,
We must cover over the embers low;
And snugly huddled from the wind and weather,
Mope like birds that are changing feather.
But the storm retires, and the sky grows clear,
When thy merry step draws near.

Winter maketh the sun in a gloomy sky,
Wrap him round in a mantle of cloud;
But, Heaven be praised, thy step is nigh;
Thou tearst away the mournful shroud,
And the earth looks bright—and Winter airy
Who has toiled for naught both late and early,
Is banished by the new-born year,
When thy merry step draws near.

The only person of that age who can dispute the laurel with Charles d'Orléans is Clotilde de Surville. This sweet poetess was born in the Bas-Vivaris in the year 1405. Her style is singularly elegant and correct, and the reader who will take the trouble to decipher her rude provincial orthography, will find her writings full of quiet beauty. The following sweet lines, which breathe the very soul of maternal tenderness, are part of a little poem to her first born.

O cher enfantet, vray portrait de pere!
Dors sur le seyn que ta bouche a pressé.
Sweet babe! true portrait of thy father's face,
Sleep on the bosom that thy lips have prest!
Sleep, little one; and closely, gently place
Thy drowsy eyelid on thy mother's breast.
Upon that tender eye, my little friend,
Soft sleep shall come, that cometh not to me!
I watch to see thee, nourish thee defend—
'Tis sweet to watch for thee—alone for thee
His arms fall down; sleep sit upon his brow;
His eye is closed; he sleeps—how still and calm!
Were not his cheek the apple's ruddy glow,
Would you not say he slept on death's cold arm?
Awake my boy!—I tremble with affright!
Awake, and chase this fatal thought—unclose
Thine eye but for one moment on the light!
Even at the price of thine give me repose!
Sweet error!—he but slept—I breathe again—
Come gentle dreams, the hour of sleep beguile!
Oh! when shall he for whom I sigh in vain,
Beside me watch to see thy waking smile?

DON CARLOS, translated from the German of Schiller, by the author of "a volume from the life of Herbert Barclay"—Baltimore.

[Missing this volume from our table for a day or two, we find it returned to its place this morning, with a slip of paper folded in it, containing the following memorandum, which being in the hand writing of a friend, in whose literary judgment we place much confidence, may happily be substituted here for any comments of our own.]

Translating like dancing, is a good exercise, but a very bad profession: it may serve to try or exhibit or improve our strength, but though it is a good thing to do, it is generally of no value when it is done. The charm of every work of genius is so much in its exterior dress of words, that in throwing that completely aside and clothing it with another, much grace is necessarily destroyed and much disguised, while the translator, by the conscience and the usages of his office, is forbidden himself to supply any, were he ever so capable. The proportions, however, of form and substance are various in different works, and Schiller's Don Carlos is one which possesses a great deal of intrinsic substantial interest, which it must preserve, in any tolerable translation, and which in fact it does preserve, in a pretty high degree, in the one before us. The author, however, has gone out of his way to seek difficulties not at all inherent in his task; he undertakes in many cases, to render line by line and word by word in the exact order and measure of the original; and to this punctilious ambition, he often sacrifices his own powers of versification, and the spirit and idiomatic ease of the English language. We find German inversions which in English are distortions—words cut in halves and their vowels taken out, as possible, horrible, extravagant, and others on hard duty with constrained meanings; and these blemishes, though an argument may be imagined in defence of them, do yet annoy the reader and injure the teacher, in which he judges of the work. Setting these aside, however, this is the performance of a man of decided talent, whose mind is full of admiration for the power and genius of his author, and of a kind zeal for diffusing the pleasure he has derived from them.

FOREIGN INTELLIGENCE.

By the *Francis Dupau*, from Havre, we have files from Paris to the 7th ult., which, with the accounts by the *Philadelphia* yesterday, of which we published the substance last evening, are chiefly interesting, as they confirm the accounts via Havana, of the surrender of the two Pretenders—*Carlos* and *Miguel*,—and thus afford the prospect that peace and perhaps relatively free governments may be established in Spain and Portugal;—countries so favored by nature, so cursed by man. We extract some details as to the occurrences which led to this surrender. The Spanish General, *Rodil*, seem to have been a special object of terror to *Don Carlos*. It was not ascertained what course he meant to take. *Don Miguel* had embarked on board the British line-of-battle-ship *Donegal*.

We do not find the particulars of the reorganization of Lord Grey's Ministry, but the address to him of certain members of the House of Commons, the reply to which will be found among our extracts, and the decisive vote on Mr. Ward's motion, proves, that it meets the approbation of the Commons.

ENGLAND.

[From the *Morning Chronicle*.]

The critical question of the State appropriation of the surplus revenues of the Irish Church, and the imminent situation of the new Cabinet, were temporarily determined last night. A majority of three hundred and ninety-six Members of the House of Commons, to a minority of one hundred and twenty, supported the amendment of the "previous question," in opposition to the motion of Mr. Ward. The plain truth on such occasions is the only becoming commentary. The division, in fact, was a vote to uphold the Ministry—to avert the political evil of a dissolution of Parliament—to prevent the possibility of a Tory Government—and to postpone a legislative determination of the critical question of appropriation. The events of the preceding week were the causes of the singular and important result of last night's debate. The split in the Cabinet had deprived Lord Grey of the Ministerial services of four Members of his Government, and placed the Premier between two widened extremes. In the re-composition of his administration, he elected to maintain a *Juste Milieu* position among the hostile parties of the State; and, with the exception of Mr. Elice, his selection of successors to the ex-Ministers was palpably that of men of "moderate" opinions. In common with the great body of reformers throughout the country—judging by the Provincial Press and innumerable private communications—we deeply lamented that Lord Grey did not form a popular and decidedly comprehensive Government. It must, however, be conceded, that the appointments of Lord Grey during the last few days have not been inconsistent with his own personal views. He had contented himself with simply forming a mild Whig Administration. But it must be admitted that Mr. Spring Rice and Lord Auckland are excellent men of business, and that all the nominations to office in the last few days have been made from the ranks of his immediate political friends.

The nature of the Court, the unimpaired character of the House of Commons, and the conflicting state of parties, added to the danger arising from the secession of Mr. Stanley and Sir James Graham, all contributed to influence Lord Grey. A large body of the House of Commons also presented an Address to his Lordship—we will not stay to inquire into its partisan origin or influence—expressive of their confidence. We well know that the motives, which at a critical conjuncture, determine members to follow in the train of each other in according to and signing such an agreement as the document, the contents of which we published on Saturday, must not be too curiously scanned. The general intention of the memorialists was to support liberal principles, and to "back up" Lord Grey in this emergency. Allusion has been made to his Lordship's reply, and the *Standard* and the *Morning Post* have given false representations of its contents. As the document is public, the subject of comment, as it is misstated in the *Troy* journals and generally circulated in political circles, we give it *verbatim*, to avoid misconstruction:—

"Dear Lord Ebrington—I received yesterday evening your very kind note accompanying the letter, which had been written under the impression

that I had determined to retire from the situation which I now hold.

"Whether I regard the expressions contained in the letter itself, or the number and respectability of the signatures, I cannot help feeling this to be one of the most gratifying testimonials of confidence and good opinion ever received by any public man.

"It imposes on me the duty of making every personal sacrifice that can be required of me, and which can be useful for the support of the principles on which the present Administration was formed. But I will not conceal from you, that declining strength makes it extremely doubtful whether I shall be found equal to the task which is thus imposed on me.

"If my endeavors to supply the places of those of whose services the country has been so unfortunately deprived prove successful, it is only by the support of honorable and independent men, in conducting the Government on safe and moderate principles, that I can hope to get through the difficulties which are before me.

"Founded on the principles of Reform, the present Administration must necessarily look to the correction of all proved abuses. But in pursuing a course of salutary improvement, I feel it indispensable that we shall be allowed to proceed with deliberation and caution; and above all, that we should not be urged by a constant and active pressure from without, to the adoption of any measures, the necessity of which has not been fully proved, and which are not strictly regulated by a careful attention to the settled institutions of the country, both in Church and State.

"On no other principle can this or any other Administration be conducted with advantage or safety. I am, &c.

"May 31, 1834.

IRELAND.

Death of Dr. Doyle.—This eminent individual, after a long and painful illness, died on Friday at Carlow. He had been formerly in the University of Coimbra, in Portugal, from whence he was transferred to the Professorship of Theology in the College of Carlow, and, in the year 1819, was appointed Bishop of the Catholic diocese of Kildare and Leighlin, being then the youngest man who had ever obtained a simi ar rank in the Irish Catholic Church.—At that period religious controversy was raging in Ireland, and Dr. D. came to the assistance of his co-religionists with a zeal and devotion which nothing could tire. For some years he signed the letters J. K. L. to his productions. He was a strong advocate for the introduction of a well regulated system of poor laws into Ireland, and succeeded in bringing over Mr. O'Connell to his opinions; but that gentleman having subsequently changed his mind on that subject, Dr. Doyle addressed a most severe and sarcastic letter to him, pointing out his inconsistencies, and asserting, that a man capable of so constantly changing his opinions ought not to possess the confidence of his countrymen. It was in answer to this letter that Mr. O'Connell denounced consistency as a 'rascally doctrine.' He was the first to promulgate the Hohenlohe miracles in Ireland, in the existence of which he appears to have placed implicit belief.

PORTUGAL.

[From the London Morning Herald.]

FALMOUTH, JUNE 1, 11 P. M.—The City of Edinburgh steamer, Sharpe, has just arrived here from Lisbon, whence she sailed on Wednesday last. The news is important, which you will see by the accompanying, handed me by Col. Sharpe:

LISBON, MAY 26.—The war is now definitively at an end. Don Miguel having surrendered and embarking at the port of Sines, or some other in Algarves, on board a British ship of war, as you will perceive from the enclosed supplement to this day's Chronicle, which his Majesty the Emperor himself condescended to hand me an hour ago, at the palace of Necessidades, where I went to congratulate him on the happy termination of his glorious labors, when, from among the crowd of courtiers, he was pleased to single me out as a witness of the commencement and progress of his exertions during the siege of Oporto, when the aspect of affairs was anything but encouraging. Don Pedro, I must say, bears his good fortune with the greatest moderation, and rejoices at the further effusion of blood being spared, and still more so at the safety of his brother, who, had he fallen into the hands of the Duke of Terceira's army instead of Saldanha's, it is apprehended, would have fallen a victim to the fury of the soldiers. Salutes from the batteries and all the ships of war in the river, have been firing all this morning. The despatch of Marshal Saldanha, dated yesterday, from Evora, was

ought this morning by his aid-de-camp, Col. Zim. Des. It is asserted that Don Miguel ordered an attack, but that his soldiers, refusing to obey, secured him, when he made a virtue of necessity, and surrendered.

The city of Edinburgh steamer taking the despatch to England is now preparing to go out, and fearing to miss the opportunity, I conclude.

Don Carlos is said to be in the same boat with Miguel. The Donegal, 74, is to carry them to England.

"To Don Alvaro da Costa, of Her Most Faithful Majesty's Council, Governor and Captain General of the Island of Madeira and Porto Santa, We, the Duke of Braganza, Regent in the name of the Queen, greet you.

"The legitimate authority of my august daughter, Donna Maria Segunda, being happily restored by the efforts of her gallant army, as well as by the spontaneous will of the people, which pronounced itself the moment they found themselves disencumbered of the Userper's faction, and wishing that the inhabitants of those islands may participate with the rest of the Portuguese nation in the advantage conferred by the liberal institutions of the kingdom, I command you, that within the term of three days after the receipt of this, you will take the oath of allegiance, and cause it to be taken by all the civil, military, and ecclesiastical authorities of the Queen and the charter, granted by me to the Portuguese nation, proclaiming the one and the other throughout the territory under your command. You will further please to understand, that in the unexpected event of your not obeying my commands, you will be dealt with as a rebel, and will be for ever excluded from all and every amnesty which I have granted, or may hereafter grant, to those who, undeceived and repentant, come to seek shelter and protection of the legitimate Government: all which I communicate for your intelligence.

"Given in the Palace of Ramalhao, the 13th of May. "Don Pedro, Duke of Braganza."

[From the Courier and Enquirer.]

IMPORTANT FROM PORTUGAL.—Capitulation of Don Miguel and Don Carlos.—Captain Flowerly, of the ship *Moro Castle*, arrived yesterday from Havana, has kindly furnished us with a supplement to the *Diario*, which contains accounts from Spain, received in Havana from Cadiz in thirty days time. These accounts embrace official reports announcing the capitulation of Don Miguel and Don Carlos to the troops of Donna Maria. We annex translations of them.

Lisbon 27th May.—It is eleven years to-day that Don Miguel (then infant) fled from Lisbon to Santarem, to destroy the constitution and usurp the throne of his august father. To-day news has reached Lisbon of his stipulating to retire from the Portuguese territory, which he has so long drenched in blood and involved in misfortune. Singular coincidence! On the 27th May, he commenced his career of crime; and on the 27th May terminated his political existence and his course of crime and outrage. At 8 o'clock, this morning an aid-de-camp of General Saldanha, arrived at Lisbon with the important news of the surrender of the army of the usurper, and immediately the intelligence spread through the capital with the rapidity of lightning. It is impossible to describe the joy which took possession of every faithful inhabitant of Lisbon. Many rockets suddenly ascended the skies—embraces, congratulations, and good wishes, passed from one to another, in every street—and no one could sufficiently express the emotions which filled his bosom. In a short time the following despatch was issued in a Supplement to No. 124 of the *Cronica Constitucional* of Lisbon.

Illustrious and Excellent Sir: I have the honor to advise your Excellency of the receipt of your despatch to-day, with two copies of the orders which your Excellency received from the government at Lisbon, as well as a quantity of proclamations published by Sr. Don Pedro Duke of Braganza. I have to say in reply to your excellency, that to avoid the further effusion of Portuguese blood, the propositions,* a copy of which your Excellency transmitted are acceded to. As Don Miguel is permitted to embark at any port, and in any vessel of the four allied nations which he may select, he chooses the port of Sines, or some other port in Algarves, and an English vessel; and I wish to know whether her Serene Highness the Infanta Donna Isabel Maria, who is in the town of Elvas, desires to accompany him. It is proper now that we proceed regularly, for which purpose I await the orders of your Excellency. I am ready to be present at any

* The conditions will be such as the two Marshals shall agree to according to their instructions.

place you may appoint, if you think it will further that end. God preserve you many years.

Evora, 26th May, 1834.

(Signed) JOSE ANTONIO DE ACVEDO LEMUS, Lieutenant General.

To His Ex. Count de Saldanha.

The Captain General of Estremadura, under date of May 26, announced that the town of Yelves has acknowledged the authority of the Queen, Donna Maria I, and that Gurumena, Campomayor, and Oguela, were about to follow the example.

Seville, Jan. 1st, 1834.—By express received at half past one o'clock this day, his Excellency the Secretary of War confirms the important news of the decisive advantages gained in Portugal, and the surrender of the Miguelite and Carlist forces; and adds, that the Pretender, in consequence of his having claimed the protection of the Secretary of the English Legation, who was at his Head Quarters, proceeded with his family to Lisbon, where instructions had already arrived from the British Government, applicable to such a conjuncture.

(Signed.) THE PRINCE OF ANGLONA.

Madrid, May 25.—Agreeably to the plan of operations agreed on between the Duke of Terceira and D. Jose Ramon Rodil, Castle-o-Branco was occupied by the Spanish troops on the 15th instant, and Thomar by the Portuguese. The Miguelites, who abandoned the (latter) city at their approach, retired a league and a half, pursued by the cavalry, to Seiseira,—a point from which they could proceed either to Santarem or Abrantes. This was the reason why the Duke of Terceira proposed to General Rodil to march upon Abrantes with the Spanish forces, and accordingly they left Castle-o-Branco and arrived at Sardeia on the 20th.

From this point and on the same day, this General communicates the results of an action which took place at Seiseira on the 16th, and the news of the retirement of Don Miguel from from the strong position which he held at Santarem, in the following extract of a letter from the Duke of Terceira, dated at Golegana on the 18th.

"It appears that the action at Seiseira was decisive, for Don Miguel durst not remain in his weakened position at Santarem, but fled towards Yelves."

In the letter enclosing this extract, Gen. Rodil states, that in consequence of that engagement, he had determined to turn back from Sarceda with the division of infantry, and cross the Eagus at Malpica and Herronna, where Col. Tena had been for two days, getting the boats of that vicinity in readiness, and "if," says Gen. Rodil, "they are in order on my arrival, the van-guard will be in Spain to-morrow, and the first division on the following day."

Capture of Don Carlos and Don Miguel.

CADEZ JUNE 1.—Civil Government of the Province of Cadiz.—The Captain of the Port has just favored me with the following intelligence:

"A felucca has arrived from Ayamonte, the Captain of which says he left their night before last, bringing a letter for the Captain general of the department, and states that the Infantes Don Carlos and Miguel had fallen into the hands of the Spanish troops at Evora, having been delivered up by their own men; also that four waggon loads of silver had been captured. No other news." "LOUIS DE COIG."

I hasten to communicate this agreeable intelligence to the loyal city of Cadiz, and the other population of the Province, for their information and satisfaction.

JOSE DOMINGO DE VIDART.

Cadiz, June 1, 1834.

Latest from the Mediterranean Squadron.—We have a letter before us, dated on board the U. S. Frigate Constellation, Toulon Roads, May 23d, 1834—at which time the Delaware, 74, Com. Patterson, was lying in these Roads. We are happy to add, that all were well on board those ships.—[Gazette.]

WINCHESTER JULY 9.—**Lamentable Accident.**—On Sunday evening, the stage in which Mr. Clay was traveling from Charleston towards Winchester, was overturned, near the Opequen, and Mr. Albert Humrick-house, (only son of Mr. H. the contractor at Shepherdstown, was instantly killed. The young gentleman was seated with the driver; the tongue broke as they were descending a hill, the horses ran out of the track, and the stage was overturned, Mr. H. falling under it. His neck was broken and his body literally crushed. This young gentleman was well known to travellers on the route for his amiability and courteousness, and his sudden and appalling death has excited general regret. Mr. Clay was slightly injured.

[From the Chinese Repository for February.]
DESCRIPTION OF THE CITY OF PEKING.

Peking, the capital of the Chinese empire, stands on a vast plain, in the interior of Chih-le, (or Pih-chih-le), the most northern province of China Proper. It is situated in latitude 39 deg. 55 min. north, and in longitude 116 deg. 45 min. east from Greenwich, and about 3 deg. 30 min. east of Canton. On the east and south, the low and sandy plain extends farther than the eye can reach; on the west and north, hills begin to rise above the plain only a few miles from the walls of the city; and at a distance beyond, the prospect is bounded by mountains which separate the province of Chih-le from Mantouch. Viewed from the summit of those mountains, the city appears as if situated in the midst of a thick forest; this effect is produced by the clusters of trees that cover the villages, temples, and numerous cemeteries which encompass the capital. From the great wall, which passes along upon this ridge of mountains, Peking is about fifty or sixty miles distant; and a little more than a hundred from the gulph of Chih-le. The Pih-ho, rising in the north beyond the great wall, flows within twelve miles of the city on the east, and then passes down in a south-east direction by Teen-tein into the sea. Several smaller rivers, issuing from the mountains on the north-west, water a part of the plain; and one of them, which is called the Tung-hwuy, descends to the city and supplies its numerous canals and tanks; it then flows eastward, and uniting with one of the larger rivers, forms an extensive water communication, by which provisions are conveyed to the capital.

Peking, or Pih-king, "the northern capital," is regarded by the Chinese as one of their most ancient cities; its early history, however, is involved in obscurity. The imperial court has been repeatedly removed from one province to another, having been held in Shen-se, Ho-nan, and in other more southern provinces. The first monarch of the Yuen dynasty, who ascended the throne in A. D. 1279, kept his court for several years at the capital of Shan-se; but subsequently removed it to Shun-teen-foo, the principal department of the province of Chih-le, and the present site of Peking. Hung-woo, the first emperor of the Ming family, established the seat of his government at Keanh-ning-foo, the principal department of the province of Keang-nan, and hence styled Nan-king, "the southern capital;" but Yung-lo, the third monarch of the same line, removed it to Peking, where it has remained to the present time. On native maps the city is not usually denominated Pih-king, but King-zeo, "the residence of the court." Since the foundations of the city were first laid, it has undergone many changes in its extent and form. For a long period it was surrounded only by a single wall, and had nine gates, and hence, even to the present day, it is sometimes spoken of as "the city of nine gates." At a later period it was extended towards the south by a new wall, leaving the former southern wall between the old and new city. At the present time, the northern division is called nuy-ching, "the inner city," and the southern, wae-ching, "the outer city;" and as in the case of Canton, the northern part is frequently denominated the Tartar city. The new wall which surrounds the outer city, or southern division of Peking, has seven gates.

The northern division of the city is nearly in the form of a parallelogram; of which the four sides face the four cardinal points; it extends from north to south about four miles, and from east to west three, having an area of twelve miles square. The southern division extends from east to west nearly six miles, and two and a half from north to south, occupying an area of about fifteen miles. Thus the entire circumference of Peking may be estimated at nearly twenty-five miles, and its area at twenty-seven square miles.

The walls of the northern division of the city, according to Barrow, are thirty feet in height, twenty-five feet in breadth at the base, and twelve at the top. The inclination is chiefly on the inner side; the outer side is smooth and nearly perpendicular. Near the gates, the walls are faced with marble or granite, but in other places with large bricks laid in mortar which is made of lime and clay, and "in process of time becomes almost as hard and durable as granite." The intermediate space between the inner and outer surfaces of the wall is filled with the earth and clay that was dug from the ditch which surrounds the city. On the outer side of the walls, square towers projecting about fifty feet from the line of the wall and of the same height with it, are built at the distance of about sixty yards from each other. Two such towers, of equal height with the walls, stand one on each side of every gate, and are

connected in front by a semi-circular fort. The arches of the gates are strong, being built of stone; they are surmounted by large wooden buildings, several stories high. On the inside of the wall, at the side of every gate, also near the middle of the interval between the gates, and at the several corners of the city, there is a species of esplanade for ascending to the top of the wall. A ditch surrounds the whole city, which is supplied from the waters of the Tung-hwuy river: with this ditch others are connected, by which the same waters are conducted to all the principal parts of this great metropolis.

To the stranger approaching the city of Peking, its lofty walls and towers give it an imposing appearance, not unworthy the capital of a great empire; but when he comes within the walls, his admiration is turned to surprise. He beholds there none of those beautiful and superb edifices, none of those neat and elegant streets, which are the principal ornament of European cities; instead of these, he sees in various directions irregular assemblages of houses, shops and temples. The style of the architecture, and the general appearance of the buildings, is the same as in Canton. Most of the streets are indeed sufficiently wide and straight; but they are not paved, and, in general, their bad condition is a just subject of complaint, in this as well as in other Chinese cities. As, however, the front of every shop in the business streets, has an arrangement peculiar to itself and before it, on either side, a perpendicular sign-board as high as the roof, covered with inscriptions in large gilt or painted letters, describing the wares within and the reputation of the dealer, and often hung from top to bottom with flags and ribbons; this diversity in the arrangement of merchandize, together with the profusion of gaudy decorations and the bustling crowd by which he is surrounded, divert the attention of the spectator, and cause him to forget in some degree the more disagreeable parts of the scenery around him.

The smaller streets are quiet and free from crowds; but those which lead to the principal gates are constantly thronged with people. The following description by an eye-witness will serve to convey some idea of the scene they often exhibit. "The multitude of moveable workshops of tinkers and barbers, cobblers, and blacksmiths; the tents and booths where tea, and fruit, and rice, and other vegetables, were exposed for sale; with the wares and merchandize arranged before the doors of the shops, contracted the spacious street to a narrow road in the middle. The processions of men in office attended by their numerous retainers bearing umbrellas and flags, painted lanterns, and a variety of large insignia of their rank and station; trains accompanying, with lamentable cries, corpses to their graves, and others conducting brides to their husbands with squalling music; the troops of dromedaries laden with coal from Tartary; the wheel-barrows and hand-carts loaded with vegetables; occupied nearly the whole of this middle space. All was in motion; the sides of the streets were filled with people buying and selling and bartering their different commodities. The buzz and confused noises of this mixed multitude, proceeding from the loud bawling of those who were crying their wares, the wrangling of others, and the mirth and laughter which prevailed in every group, could scarce be exceeded. Pedlars with their packs, and jugglers, and conjurers, and fortune tellers, mountebanks and quack-doctors, comedians, and musicians, left no space unoccupied." Such, according to Mr. Barrow, is the scene exhibited in a street in Peking. The crowd of people, and the strange sights and sounds on the occasion described, was probably greater than usual; but he has given too correct a representation of what may sometimes be witnessed even in the suburbs of Canton, to allow us to accuse him of much exaggeration.

Soon after the present dynasty took possession of the throne of China, in 1644, the Government, designing to occupy the northern division of the city as barracks for its troops, purchased the houses of the private owners and gave them to the Tartars who had served in its wars; but these brave soldiers, less skilled in the arts of peace than the people they had subjugated, were soon obliged to sell them to the Chinese. In consequence of this, all the principal and many of the smaller streets, with the exception of those near the imperial palace, are owned and occupied by Chinese; and the Tartar soldiers have been compelled to take up their abode in the lanes and alleys near the walls of the city. Thus far we have spoken of the city as a whole; we now proceed to survey its principal parts.

The northern division of Peking consists of three inclosures one within another, each surrounded by its own wall. The first contains the imperial palace

and the abodes of the different members of the imperial household; the second was originally designed for the residence of the officers and attendants of the court, but is now occupied in part by Chinese merchants; the third consists of the remaining space inclosed by the outer walls, which have already been described.

The first inclosure, which is called the *forbidden city*, being the seat of 'the dragon's throne,' the place from which emanates the authority that governs one-third of mankind, is the most splendid as well as the most important part of Peking. According to the notions of a Chinese, all within its walls is gold and silver. "He will tell you," says Mr. Barrow, "of gold and silver pillars, gold and silver roofs, and gold and silver vases, in which swim gold and silver fishes."

It is situated nearly in the centre of the northern division of the city. It is an oblong parallelogram about two miles in circumference, and enclosed by a wall of nearly the same height and thickness as that of the outer wall of the capital. This wall is built of polished red brick, and surrounded by a broad ditch lined with hewn stone, and covered with varnished tiles of a brilliant yellow, which give it the appearance, especially when seen under the rays of the sun, of being covered with a roof of gold. On each of the four sides is a gate consisting of three arcades or avenues, surmounted by a tower. A tower also stands at each corner of the wall. The interior of this inclosure is occupied by "a suite of court yards and apartments which seem to vie with each other in beauty and splendor." The terraces and glacis are covered with large bricks, and the walks that lead to the great halls, are formed of large slabs of gray and white stone. It is divided into three parts, the eastern, middle, and western. The middle division contains the imperial buildings, which are subdivided into several distinct palaces, each having its particular name and destination. "There reigns," says father Hyacinth, "among the buildings of the forbidden city, a perfect symmetry both in the form and height of the several edifices and in their relative position, indicating that they were built upon a regular and harmonious plan." We will notice a few of the most remarkable objects it contains, beginning at the southern part of the middle division.

1. Woo-mun, 'the meridian gate.' Before this gate, on the east, is a lunar, and on the west, a solar dial, and in the tower above it a large bell and gong. Public officers of both the civil and military departments, enter and leave the palace by the eastern avenue; none but the princes of imperial blood, are permitted to pass the western, and no one but the emperor the southern avenue. Whenever he goes out or returns through it, the bell is rung and the gong struck. When his troops return in triumph from war and come to present their captives, the emperor places himself here to perform the ceremony of receiving the prisoners. Here also, are distributed the presents which the emperor makes to foreign princes and their ambassadors, as well as to his own vassals. After passing this gate the visitor enters a large court, through which runs a small canal, over which are five bridges adorned with balustrades pillars, steps, and figures of lions and other sculptures, all of fine marble. He next enters a beautiful court terminated on the right and left by gates, porticoes, and galleries adorned with balconies supported on pillars.

2. Tae-ho mun, 'the gate of extensive peace.'—This has five avenues, and in other respects resembles the woo-mun, or meridian gate; it is a superb building of fine white marble. The height of the basement is twenty feet, and of the whole edifice, according to father Hyacinth, one hundred and ten. The ascent to it is by five flights of forty two steps each, bordering with balustrades, and ornamented with tripods and other figures in bronze. The central flight is very broad, and is reserved for the emperor alone; princes and officers of the first rank enter by the two next, and inferior officers by the others. Here the emperor on the first day of the year, on the anniversary of his birth and several other occasions, receives the congratulations and respects of his officers, who prostrate themselves to the earth before him and strike the ground with their foreheads.

3. Chung-ho teen, "the hall of perfect peace."—This is the hall of audience where the emperor comes to examine the implements prepared for the annual ceremony of ploughing; and where also the genealogical tablets of his ancestors are presented to him.

4. Puan-ho teen, "the hall of secure peace." In this the emperor gives a banquet to his foreign guests on new-year's day; and the authors of the

biography of his deceased father come in pompous ceremony to this hall to present to him their work. After ascending three flights of steps, and passing another gate, the keen ting mun, the visitor sees before him,

5. Keen ting kung, "the tranquil palace of heaven," i. e. of the emperor. This is a private retreat, to which no one can approach without special permission. To this palace the emperor repairs whenever he wishes to deliberate with his ministers upon the affairs of state, or to see those who present themselves as candidates for office or for advancement. It is described by Timkowaki as "the loftiest, richest, and most magnificent of all the palaces. In the court before it is a small tower of gilt copper, adorned with a great number of figures which are beautifully executed. On each side of the tower is a large vessel likewise built of copper, in which incense is burnt day and night. It was in this palace that Kang he, in the fiftieth year of his reign, instituted a grand festival, to which every individual whose age exceeded sixty years, whether a civil or military officer, or a private citizen, was invited. Tents were erected in front of the palace, and tables spread for many thousands. The sons and grandsons of the emperor themselves waited upon the guests. At the end of this generous entertainment, presents were distributed adapted to the condition and rank of those to whom they were given. Keen-lung also, in the fiftieth year of his reign, made a similar feast. The number of guests was twice as great as on the former occasion. Those whose age exceeded ninety years, were admitted to the table of the emperor, who addressed them with kindness and afterwards bestowed on them magnificent presents.

6. Keou-tea teen: This hall resembles in many respects the chun-ho teen; it contains twenty-five of the Emperor's seals; ten others are kept at Mouk-den.

7. Kwan ning kung, 'the palace of earth's repose,' i. e. of the empress, is the usual abode of 'heaven's consort.' This opinion, that keen and kwan, the emperor and empress, are heaven and earth, is a favorite dogma of the reigning dynasty, and is sedulously inculcated in its state papers. Beyond this palace stands the

8. Kwan ning mun, 'the gate to earth's repose,' which admits the visitor to the

9. Yu hwa yuen, 'imperial flower garden.' This is laid out into beautiful walks designed for the use of her majesty, who, being of Tartar origin, is not deprived of this pleasure, as are the Chinese ladies, by being crippled with small feet. The gardens are filled with elegant pavilions, temples, and groves, and interspersed with canals, fountains, lakes, and beds of flowers. Two groves, rising from the bosom of small lakes, and another crowning the summit of an artificial mountain of rugged rocks, add much to the beauty of the scene. At the east of this mountain is a library, said to contain a complete collection of all books published in the empire.

10. Shin-woo mun; this gate stands beyond the imperial flower garden, and forms the northern entrance to the forbidden city. We have now completed our survey of the central division of the kin chin; the eastern contains fewer objects of interest.

11. Nuy-ko, 'the council chamber.' This term, nuy-ko, is used to denote not only the cabinet of the emperor, but also the hall in which that body holds its sessions. It is situated near the southern wall; and beyond it, towards the east, is the nuy-koo, the imperial treasury.

12. Chuen-sin teen, 'the hall of intense mental exercises.' It is situated at some distance northward from the nuy-ko. Offerings are brought and sacrifices presented here to "the deceased teacher," Confucius, and likewise to our ancient sages.

13. Wan-yuen ko, the imperial library, or, more literally, 'the hall containing the literary abyss':—this is situated near the chuen-sin teen, and consists of several buildings and suites of rooms, which, containing a large compilation of the national literature, Sze koo tsuen shoo, 'the complete books of the four treasures' (or libraries), presents the largest and most complete literary collection in the empire. Farther north, in this division of the prohibited city, are situated several imperial buildings and the palaces of princes: and also

14. Fung-Seen teen, a temple, to which the emperor comes to "bless his ancestors," whose names are written on tablets deposited here. Before the day when any great sacrifice is to be offered, and when he is about to leave the city, as well as when he returns, the emperor pays a visit to this temple; likewise, at the commencement of each of the four seasons of the year, and on the first and fifteenth days of every month, offerings are here presented,

and during each day are thrice repeated. In the western division of the prohibited city, beginning again at the south, we notice only a few of the principal objects.

15. Nan-heun teen: this hall stands near the southern wall, and in it are collected the portraits of the sovereigns of preceding dynasties, and likewise tablets, and broad rolls, containing the portraits of eminent scholars and sages; these are arranged according to the degree of merit attributed to each.

16. Woo-ying teen; this hall contains his majesty's printing establishment; it has a bindery and buildings in which the blocks used in printing are preserved.

17. Nuy-woo foo; here are held the sessions of a court of commissioners, or controllers, which "has among its prerogatives the regulation of receipts and expenditures of the court, its sacrifices and feasts, rewards and punishments, and all that relates to the instruction of the younger members, &c. This establishment, together with the principal magazines of the crown, which are under its superintendence, is situated on the wall on the west side of the city.

18. Ching hwang meau, 'the temple of the guardian deity of the city,' which stands at the north-west corner of the inclosure. In the north-eastern part of the same division, are six palaces which are occupied by the females of the emperor; they are situated like those destined for the residence of the princes, in the eastern division.

We have now completed our brief survey of the prohibited city, which is regarded by the Chinese as the most sacred and awful of places. In their estimation it is also the most magnificent. The glittering yellow and various ornaments of the roofs of its palaces and other edifices, and the brilliant colors and abundant gilding applied to the interior, give it, in their eyes, a dazzling glory; but were we to seek in their convenience of construction, or for much that may seem elegant or grand to one whose taste has been formed according to any of the rules of architecture adopted by the people of the west, we should doubtless meet with disappointment.

ST. PETERSBURGH, MAY 10.—The journals contain very long accounts of the ceremony of May 5th, in the Palace Church. The Emperor and Empress, who were accompanied by the Imperial Prince, and the other Members of the Imperial Family, having taken their places on the Throne, the prayer, composed for the occasion was read, after which the Emperor took the Prince by the hand and led him to the desk on which the New Testament was placed, when his Imperial Highness read, and then subscribed the oath:—

"Faithfully to serve the Emperor my father in all things, even to the last drop of my blood; and to maintain to the best of my power all the rights and privileges of his Imperial Majesty; and, as successor to the Throne of all the Russias, as well as of Poland, and Finland; and to maintain in full force, and unimpaired, all the ordinances respecting the successor to the Throne and family institutions which are contained in the laws of the Empire, as I shall have to answer to God, in his last Judgment. O Lord God, the Father, and the King of Kings, teach, enlighten, and guide me in the great work that awaits me; send down thy Holy Spirit that I may comprehend what is pleasing in thy sight, and conformable to thy Commandments. Into thy hands I give my heart. Amen." The Prince read at first with a firm and loud voice, but when he invoked the King of Kings his voice trembled, and was interrupted with tears. Several times he began again, but could not proceed. The conclusion was pronounced with audible sobbing. The emotion of the young Prince affected all who witnessed it. After he had signed the oath the Emperor embraced him with the utmost affection, kissed him, and led him to the Empress. The Prince was going to embrace her, but the Emperor anticipated him, embraced the Empress, and then folded both mother and son in his arms. This affecting scene deeply moved the hearts of all present; all shed tears of emotion, and implored the blessing of God on the August Family to which Russia owes its happiness, its prosperity and its glory. A solemn *Te Deum* followed, and a salute of artillery announced to the capital the conclusion of the important solemnity. The religious ceremony being concluded, the Prince was introduced to actual service in the ranks of the Russian Army in the Hall of St. George an altar was erected before the throne, on which were the Cross and the Gospels. The colors of the Guards, those of Borodino, Liepsic, Paris, and Varna, and the standard of the Atamarit regiment of Cossacks of which

the Prince is Colonel, were suspended near the throne. Around were the brave men, the Imperial guardian, the representatives of the glory of Russia; and on the two sides of the hall the pupils of all the military institutions, the flower of the Russian nobility, the hopes of the nation. The Grand Duke Michael commanded. When the procession entered the hall, a military march was performed, and on the entrance of their majesties the national hymn, "God save the Emperor," struck up. Prayers having been performed, the Emperor led the Prince to the altar, where he took the oath "to serve with fidelity and zeal his Majesty the Emperor, according to all the military regulations, to be always ready to oppose the enemies of his Majesty and of the empire, and on all occasions to act as becomes a brave, obedient and loyal soldier." The military then presented arms, the music played, but was overpowered by the loud hurrahs of the troops, in return to the gracious salutation of the Emperor. Their Majesties, with the imperial family and suite, retired. So concluded the festivities of this happy and memorable day.

The imperial Prince addressed, on the 4th, a letter to General Count Essen, Governor of St. Petersburg. He says that having attained his majority, and taken the oath of fidelity to his father and to the country, he shall consider it as his most sacred duty to prepare himself, when the will of the Emperor shall allow him, to serve him and Russia. It is his wish to mark this important day of his life by something useful, and to give some proof of his gratitude to the place where he passed the years of his childhood, where he learned to love Russia, and where he had taken his sacred oath. He, therefore, requests to cause 50,000 rubles, which he sends him, to be distributed among those of the poorer inhabitants of St. Petersburg who most need assistance, and most deserve it.

The Twin Brothers.—The Count de Ligniville and Count D'Autricourt, twins, descended from an ancient family in Lorraine, resembled each other so much, that when they put on the same kind of dress, which they did now and then for amusement, their servants could not distinguish one from the other. Their voice, gait and deportment were the same, and these marks of resemblance were so perfect, that they often threw their friends and even their wives into the greatest embarrassment. Being both captains of light horse, the one would put himself at the head of the other's squadron without the officers ever suspecting the change. Count D'Autricourt having committed some crime, the Count de Ligniville never suffered his brother to go out without accompanying him, and the fear of seizing the innocent instead of the guilty, rendered the orders of arrest of no avail. One day, Count de Ligniville sent for a barber, and after having suffered him to shave one half of his beard, he pretended to have occasion to go into the next apartment, and put his night gown upon his brother, who was concealed there, and taking the cloth which he had about his neck under his chin, made him sit down in the place which he had just quitted. The barber immediately resumed his operation, and was proceeding to finish what he had begun, as he supposed, but, to his great astonishment he found that a new beard had sprung up. Not doubting that the person under his hands was the devil, he roared out with terror and sunk down in a swoon on the floor. Whilst they were endeavoring to call him to life, Count D'Autricourt retired again into the closet, and Count de Ligniville, who was half shaved, returned again to his former place.—This was a new cause of surprise to the poor barber, who imagined that all he had seen was a dream and he could not be convinced of the truth until he beheld the two brothers together.

The sympathy that subsisted between the two brothers was no less singular than their resemblance.—If one fell sick, the other was indisposed also; if one received a wound the other felt pain; and this was the case with every misfortune that befel them; so that, on that account, they watched over each other's conduct with the greatest care and attention. But what is still more astonishing, they both had often the same dreams. The day that Count D'Autricourt was attacked in France by the fever of which he died, Count de Ligniville was attacked by the same in Bavaria, and was near sinking under it.—[Paris Journal.]

The public will be glad to hear that their favorite writer of Eastern Tales is about to publish another story of the land of romance—we allude to the forthcoming Oriental novel, by the author of "Zohrab" and "Heji Baba" (Mr. Morier) to be entitled, "Ayesha, the Maid of Kara."

SUMMARY.

Cholera on the Mississippi.—The Randolph (Tennessee) Recorder of the 21st June, says:—"This desolating pestilence still traverses the lower part of the Mississippi. Several boats have lately passed up from New Orleans, having buried from 6 to 15 passengers. The Kentuckian passed up last Tuesday, having buried 18, principally Dutch emigrants. The disease breaks out and confines itself almost exclusively among crowded deck passengers, who neglect all necessary precautions of cleanliness, and against exposure to the burning sun and night air."

AMERICAN SKILL.—We have just examined the binding of an edition of Shakespeare, and of a copy of Rogers's Italy. It is green and gold, and done by two young book binders of this city, H. & H. Griffin, in a manner that reflects great credit upon their skill, and is equal to any thing we are in the habit of seeing from London or Paris. Their bindery is No. 33 Ann street.

WASHINGTON'S MANUSCRIPT PAPERS AND BOOKS.—An act was passed at the late session of Congress appropriating \$25,000, for the purchase of "the manuscript papers, and a portion of the printed books of General George Washington." These papers are to be deposited in the Department of State.

FORTIFICATIONS, LIGHT HOUSES, &c.—Among the appropriations made for these objects by Congress, are the following in this State:

For repairing Fort Columbus and Castle Williams, (Governors Island)	\$50,000
For a fort on Throg's Neck East river,	100,000
For a light house on a proper site at or near the mouth of Esopus creek and near Sangerties,	\$5,000
For beacon light on the piers at the mouth of Genesee river and Soda bay,	\$4,000
For a light-house or beacon light on one of the piers at the harbor of Oswego, on Lake Ontario,	\$3,666
For placing four lights on the following points in Hudson's river, viz. one near Van Wic's point, one near Castleton, one on the island near New Baltimore, and one at Kinderhook.	\$600
For a beacon light at the end of the pier at Silver creek, in Lake Erie,	\$2,000
For a light-house on a proper site at the mouth of Oswegatchie, a tributary stream of the St. Lawrence,	\$5,000
For a light-house on the flats in Hudson's river, above Stuyvesant's landing in the place of the one carried away by the ice,	\$5,000

IMPROVEMENT OF THE HUDSON RIVER.—According to the recent act appropriating \$70,000 for this purpose, the improvement is to be made in conformity with a "plan submitted to the House of Representatives by the Department of War in March, 1832."

Fort Adams.—The work at this important fortress was resumed on Monday last—nearly 400 laborers are now daily employed.

Great Breach in the Delaware and Raritan Canal.—We copy the following from the Northern Liberties News Room Books:—

"About 4 o'clock on Wednesday afternoon a most extensive breach occurred in the Delaware and Raritan Canal, directly where it crosses the Assausink creek. It was occasioned by the sudden closing of the lower lock gate, near Lamberton, which was done for the purpose of preventing a break that was anticipated at that point; it caused the upper water to rise suddenly several feet, and burst down the eastern embankment, to the distance of about 80 yards, and washed out to the depth of 10 or 15 feet below the level of the canal. The creek and swamp adjoining is filled up with sand and gravel for an acre or two. It is estimated that it will cost between two and three thousand dollars, and will stop the navigation for a month or more."

We learn that a breach did occur near Lamberton, on the same afternoon.

SURVEYORS' INSTRUMENTS.

Compasses of various sizes and of superior quality warranted.
Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by
E. & G. W. BLUNT, 134 Water street, 3rd fl.

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads
No. 364 Elizabeth street, near Bleecker street,
New-York.

RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlem Railroad, now in operation.
J25 17

RAILROAD CAR WHEELS, BOXES AND
AND OTHER RAILROAD CASTINGS.

Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited.
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INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

EWING & HEARTT, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.
For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewing & Heartt.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable. They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,

Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyors' Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These Instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833.

To Messrs Ewing & Heartt.—As you have asked me to give my opinion of the merits of those Instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming acquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprise so well merits, I remain, yours, &c.

B. H. LATROBE,

Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same.
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LOCOMOTIVE ENGINES.

THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1/2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine-wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company.

WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

Ninety-five tons of 1 inch by 1/4 inch,	Flat Bars in length of 14 to 16 feet, counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.
200 do. 1 1/2 do.	
40 do. 1 1/2 do.	
800 do. 2 do.	
800 do. 2 1/2 do.	
soon expected.	

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2 1/2, 2 3/4, 3, 3 1/4, and 3 1/2 inches diameter for Railway Cars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.

9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them.
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ENGINEERING AND SURVEYING
INSTRUMENTS.

The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy; also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,

Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repair, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES P. STABLER, Superintendent of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors.

E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY B. CAMPBELL, Eng. Philad.

German and Norrist. Railroad

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